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**MONTHLY
LABOR REVIEW**



SPECIAL FEATURES IN THIS ISSUE

Unemployment-benefit plans in the United States, 1931 and 1932, p. 1225

Labor productivity and employment in the tire industry, p. 1252

Trend of child labor in the United States, 1920-1931, p. 1322

Labor legislation of 1932, p. 1347

Costs of dwelling units in various cities, p. 1388

**NEW PUBLICATIONS OF
THE BUREAU OF LABOR STATISTICS**

Safety codes for the prevention of dust explosions. Bulletin No. 562.

Park recreation areas in the United States, 1930. Bulletin No. 565.

Union scales of wages and hours of labor, May 15, 1931. Bulletin No. 566.

Wages and hours of labor in the manufacture of silk and rayon goods, 1931. Bulletin No. 568.

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IN PRESS

Wages and hours of labor in foundries and machine shops, 1931. Bulletin No. 570.

UNITED STATES DEPARTMENT OF LABOR

W. N. DOAK, Secretary

BUREAU OF LABOR STATISTICS

CHARLES E. BALDWIN, Acting Commissioner

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Contents

	Page
Special articles:	
Operation of unemployment-benefit plans in the United States during 1931 and 1932: Part 1. Company and joint agreement plans...	1225
Labor productivity and employment in the tire industry.....	1252
Employment conditions and unemployment relief:	
† Junior employment problems under present industrial conditions....	1269
Massachusetts—Emergency planning and research bureau for Boston architects and engineers.....	1272
Unemployment in foreign countries.....	1274
Germany—	
Suburban settlements for unemployed in Stuttgart.....	1278
Emergency work for unemployed.....	1280
Palestine—Unemployment since 1926.....	1281
Japan—Unemployment, 1929-1932.....	1282
Productivity of labor:	
Man-hour productivity in the petroleum-refining industry in 1929....	1283
Insurance and pension plans:	
Denmark—Social insurance.....	1293
Great Britain—Supplementary unemployment insurance and pension schemes in industry.....	1299
New Zealand—National provident fund.....	1301
Industrial and labor conditions:	
Occupational grouping of gainful workers, 1910 to 1930.....	1303
Increase in farm population during 1932.....	1304
Conditions in the upholstery-weaving industry in Philadelphia.....	1305
Decrease in pay roll in Ohio industries.....	1306
Great Britain—Decrease in number of agricultural workers.....	1308
India—Serfdom and forced labor in Hyderabad.....	1308
Indo-China—Decree regarding forced labor.....	1309
Minimum wage:	
Massachusetts—Work of Minimum Wage Commission.....	1311
Women in industry:	
Marital condition of gainfully occupied women in 1930.....	1313
Child labor:	
Report of Advisory Committee on Employment of Minors in Hazardous Occupations.....	1315
Trend of child labor in the United States, 1920 to 1931.....	1322
Child workers in the United States, 1930.....	1334
Industrial accidents:	
Coal-mine fatalities in the United States and Europe.....	1337
Coal-mine accidents in the United States, 1930.....	1338
Relation between accidents and cost of building construction.....	1339
Maine—Industrial injuries, 1931.....	1340
Workmen's compensation:	
Indiana—Executive of corporation held not an "employee" within compensation act.....	1342
Louisiana—Compensation denied for injury caused by willful attempt to injure another.....	1343
Recent compensation reports—	
Kansas.....	1344
Oregon.....	1345
Philippine Islands.....	1346
Labor laws and court decisions:	
Labor legislation of 1932.....	1347
Arkansas—Traveling salesmen required to secure peddler's license under city ordinance.....	1352
China—Amendments to labor legislation.....	1353

Family allowances:	Page
Family allowances for teachers in certain foreign countries.....	1355
Experiments with family allowances in the Church of England.....	1357
Belgium—Family-allowance funds, December, 1931.....	1357
New South Wales—Family allowances in 1931.....	1359
Cooperation:	
Germany—Labor banks.....	1362
Industrial disputes:	
Strikes and lockouts in the United States in October, 1932.....	1365
Conciliation work of the Department of Labor in October, 1932.....	1367
Labor congresses:	
Canada—Convention of Trades and Labor Congress, 1932.....	1372
Labor agreements, awards, and decisions:	
Agreement establishing 5-day week for printers in Chicago.....	1374
Agreement in upholstery industry in Philadelphia.....	1374
Wage reduction for printers in Cleveland made by award.....	1375
Housing:	
Building permits in the principal cities of the United States, October, 1932.....	1377
Costs of dwelling units in various cities, as shown by building permits.....	1388
Wages and hours of labor:	
Wage-rate changes in American industries.....	1397
Wage changes reported by trade-unions and municipalities since August, 1932.....	1400
Australia—Basic wage in various States.....	1402
Cuba—General survey of wages, 1931 and 1932.....	1403
Germany—Hours and earnings in the shoe industry in March, 1932.....	1411
Great Britain—	
Wages of railway workers, 1932.....	1412
Wage reduction in Scottish woolen industry.....	1413
Lancashire cotton spinners' hours and wages.....	1414
India—Wages and hours in the jute industry of Bengal, 1931.....	1415
Netherlands—Wage rates of port workers.....	1417
Trend of employment:	
Summary for October, 1932.....	1419
Employment in selected manufacturing industries in October, 1932.....	1420
Employment in nonmanufacturing industries in October, 1932.....	1430
Trend of employment in October, 1932, by States.....	1433
Employment and pay roll in October, 1932, in cities of over 500,000 population.....	1440
Employment in executive civil service of the United States, October, 1932.....	1440
Employment in building construction in October, 1932.....	1441
Employment on Class I steam railroads in the United States.....	1443
Retail prices:	
Retail prices of food in October, 1932.....	1445
Retail prices of coal in October, 1932.....	1448
Wholesale prices:	
Index numbers of wholesale prices, 1913 to October, 1932.....	1451
Wholesale prices in the United States and in foreign countries.....	1455
Immigration and emigration:	
Statistics of immigration for September, 1932.....	1459
Publications relating to labor:	
Official—United States.....	1461
Official—Foreign countries.....	1462
Unofficial.....	1464

This Issue in Brief

Company and trade-union plans for the payment of unemployment benefits have been affected severely by the depression. A recent study by the Bureau of Labor Statistics of the experience of the funds since the spring of 1931, when a similar study was made, discloses that in most instances the funds have been maintained with the greatest difficulty and in several instances have had to be given up or suspended. However, in spite of the fact that the lowered incomes of the funds have not permitted the payment of benefits adequate to the needs of the beneficiaries, the funds are generally considered to have been of very great assistance and there is a general desire to keep them in operation. Page 1225.

Man-hour output in the manufacture of pneumatic tires has increased 86 per cent since 1926, 172 per cent since 1922, and 581 per cent since 1914, as a result of technological changes, according to a study by the Bureau of Labor Statistics. Until 1930, annual increases in the total output of tires were usually sufficient not only to reabsorb the large surpluses of labor caused by the technological changes, but to increase the total number of workers employed. Since 1930, however, the drastic reductions in the total number of tires produced, coupled with further and even larger increases in labor productivity, have resulted in a large body of tire workers being totally unemployed, with the remaining workers employed only part time. Page 1252.

There was a general downward trend in the number of employment certificates issued to children from 1920 to 1931, according to reports received by the United States Children's Bureau from 13 cities. From 1929 to 1931 the decline in the number of children going to work was especially heavy. In 1931, 28 per cent of the children for whom this information was known started to work at the age of 14 years. Comparative figures over the period 1929 to 1931 indicate, however, a slightly greater decline in the employment of younger than of older children. Page 1322.

The percentage of dwellings erected in the different cost groups varies greatly between cities. This is shown by a compilation prepared by the Bureau of Labor Statistics, based on estimated costs as given in building permits, which do not include land costs. For example, in Los Angeles in 1931, 87.6 per cent of all 1-family dwelling houses showed estimated costs of less than \$5,000. In contrast, in Brooklyn only 4.2 per cent of all 1-family dwellings had estimated costs of less than \$5,000. The compilation gives comparative figures for 10 cities for both 1929 and 1931. Of these 10 cities, 4 showed a larger percentage of 1-family dwellings costing less than \$5,000 in 1931 than in 1929. Page 1388.

Early in 1932 the engineering societies of Boston and the Boston Society of Architects jointly organized the Emergency Planning and Research Bureau (Inc.), taxing themselves to raise funds to aid the most worthy and needy members in the professions represented by

these societies. Through this agency jobless men were not only provided with remunerative employment along the lines for which they had been educated and trained, but their work was directed to meet actual community needs. The surveys and studies made at low cost by these men under the auspices of the bureau were of much public value. Page 1272.

Sharing of work during dull periods, an unemployment-insurance fund, and a 5-day week for three months of the year are provided for in the agreement made a few months ago between the Philadelphia Upholstery Manufacturers' Association and Upholstery Weavers and Workers' Union No. 25. Owing, however, to the depressed economic conditions in the industry, it has not been possible as yet to put some of these provisions into effect. Page 1374.

Significant shifts in the number and proportion of gainful workers in the various occupational divisions in the United States are shown in the report on occupation statistics for 1930 recently issued by the Bureau of the Census. Although the total number of gainful workers 10 years of age and over in the United States in 1930 was 27.9 per cent higher than in 1910, the gainful workers in agriculture decreased 15.5 per cent during this period. Page 1303.

Daily wage rates in Cuba have declined from 15 to 25 per cent in most industries since July 1, 1931, and the total pay roll has decreased approximately 40 per cent during the same period, according to the American consul at Habana. A report by the consul on wages in various industries in Cuba is given on page 1403.

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Operation of Unemployment-Benefit Plans in the United States During 1931 and 1932

Part 1. Company and Joint Agreement Plans

A STUDY of all the known plans for the payment of unemployment benefits was made by the Bureau of Labor Statistics in April, 1931.¹ That study was made at the request of the select committee appointed to investigate unemployment-insurance systems in accordance with Senate resolution 483 (71st Cong.). The resolution stated, among other points to be covered, that it was the purpose of the study to determine the manner in which each such system survived the economic depression. In view of the continuance and the increased severity of the depression, therefore, the earlier study has now been extended to cover the experience of the funds since the spring of 1931. In the survey just finished by the bureau all the firms maintaining unemployment-benefit funds or guaranteeing a certain minimum of employment, the unions having joint agreements providing for the payment of unemployment benefits, and the local unions paying unemployment benefits to their members were asked to inform the bureau of their experience from the time of the previous study to the most recent date available in 1932.

The original study covered 15 company plans, 16 joint agreements, and 48 local union plans. Since that time two additional company plans have been started and a third, established in 1929, has been brought to the attention of the bureau. Two joint agreements² and three trade-union plans also have been set up. In addition, the National Electrical Manufacturers' Association, having a membership of 300 companies, with a total output comprising 85 to 90 per cent of the electrical product of the country, announced the adoption of an unemployment-insurance plan on June 3, 1932, similar to the plan adopted by the General Electric Co. in 1930.

Reports regarding the operation of the plans throughout the period of depression have been secured from all the companies, from all the trade-unions having joint agreements, and from all but five of the local unions having plans providing for the payment of unemployment benefits.

¹ U. S. Bureau of Labor Statistics Bul. No. 544: Unemployment-benefit plans in the United States and unemployment insurance in foreign countries. Washington, 1931.

² One joint agreement covering members of Upholstery Weavers and Workers' Union No. 25 of Philadelphia, Pa., has been provided for but has not yet been placed in operation, owing to the fact that mills are working only 10 per cent of capacity.

In considering whether or not the plans have been adversely affected by the depression, it is important to remember that the character of the plan and the liberality of the provisions affect its ability to withstand the effects of a prolonged period of depression such as the present one. If the benefits are small or if a large proportion of unwanted workers are either discharged or are dropped after a short period of benefit, the plan may appear to be a success from the viewpoint of the industry and the retained workers but may not have contributed much toward meeting the real problem of unemployment. Even in cases where comparatively restricted benefits are paid, however, the survey shows that the depression has put such a strain on the funds that in most instances they have been maintained only with the greatest difficulty. Three of the company plans have been definitely given up. In two cases, that of the Brown & Bailey and the Leeds & Northrup companies, both of Philadelphia, the benefit fund was exhausted and it was impossible to build up the fund under present conditions. In both of these companies, however, the plans are regarded as having been of great service while they were functioning, and it is planned to reestablish them when conditions improve. In the third plan, that of the Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., the employment guaranty for permanent employees, established in 1929, had been discontinued but the firm expected to submit a plan to the Wisconsin Industrial Commission in compliance with the provisions of the unemployment-insurance law of that State. Another fund, that of the Dennison Manufacturing Co., Framingham, Mass., was practically exhausted, and the plan of the United Diamond Works (Inc.), Newark, N. J., which suspended operations in 1931, had not been resumed. At the present time, therefore, there are 14 company plans, including the 2 established in 1932, which are still in operation.

Three of the joint agreements for the payment of unemployment benefits have been discontinued. In the case of the United Wall Paper Crafts and their employers, the unemployment-benefit provision was included for the last time in the agreement signed in 1929, and in the full-fashioned hosiery industry a similar provision was omitted from the general trade agreement concluded in September, 1931. The joint agreement of the Wilkes-Barre Lace Co. and the local branch of the Amalgamated Lace Operatives of America was dissolved in the fall of 1931, but the unemployment-benefit plan was continued by the local. Two other agreements in the lace industry, although not officially given up by the companies, were being maintained by the members of the locals, the companies having ceased payments to the funds.

Four trade-union plans have been discontinued since the spring of 1931, while many others have been able to continue only through the increase of assessments and reduction in the amount of benefits. In many cases the money was being paid out in benefits practically as fast as it was collected, and the limitation on the benefit period which is commonly found in the plans had been disregarded in the majority of cases and benefits were being paid to the limit of the ability of the funds to meet the extended payments.

In general it may be said that the payments from all types of funds, particularly as they have been reduced as the result of the lowered incomes of the funds, have not been adequate to meet the financial

needs of the beneficiaries, although they have undoubtedly been of very great assistance. This is clearly indicated by the practically universal desire to continue the benefit funds and by the efforts which have been exerted to keep them in operation.

Detailed information, regarding the operation of the company and joint agreement plans, which has been furnished to the bureau follows. The trade-union plans will be covered in the January, 1933, issue of the Monthly Labor Review.

Company Plans

Dennison Manufacturing Co., Framingham, Mass.

THE unemployment-benefit plan of the Dennison Manufacturing Co. was started in 1916 and appropriations by the company between 1916 and 1919 (at which time the last payment into the fund was made) amounted to approximately \$147,000. As first formulated and up to January, 1931, the plan provided for the payment of benefits to employees who were unemployed because of lack of work or whose earnings were reduced because of transfer to a job paying lower wages than their own. In January, 1931, the plan was changed to a guaranty of 50 per cent of the normal weekly pay to employees without dependents and of 70 per cent to those having dependents, who had at least six months' service with the company and who were retained on the pay roll.

The average number of employees during 1931 was 1,927 and the average number of employees covered by the plan was 1,675. The balance in the fund at the end of the year was \$28,576.33. During the first half of 1932 the effect of the depression was gradually to reduce the number of employees, so that in June the average number was 1,436 and the number covered by the plan, 1,386. The amount in the fund at the end of June, 1932, was \$14,682.26. Total benefits paid in 1931 amounted to \$20,692.06 and during the first half of 1932 to \$15,069.70. Because of the depletion of the fund, payments from it, effective as of June 1, were discontinued until October 1, 1932. This change was made by vote of the employees, as it was evident that payments could not continue through both the summer and winter and it was felt that the payments would be far more important during the coming winter than during the current summer months.

The so-called unemployment-benefit plan is really a plan to cover underemployment instead of unemployment, as it does not take care of those who are discharged for permanent lack of work and are off the pay roll of the company. It is said to have done a good deal to even out the flow of work and maintain a more uniform earning power for the employees; but although in the past the employees have counted a great deal upon the fund, there was a feeling among them after the depression became severe and it was necessary to discharge employees that a greater number would have been kept on the pay roll if they had not had the fund. While the company states that this has not been an influence in discharges, it is easy to see how employees might feel this to be the case.

As a part of the original plan, a clause was incorporated guaranteeing 85 per cent of a person's regular earnings in case of transfer to a different class of work. The company has believed for a long time that this should not be a part of the unemployment plan but has never

been able to get the consent of the employees to change it. It is hoped by the company, however, that when payments to the fund are resumed this measure will not be included. The company expects to incorporate several new features in the plan when it again becomes possible to build up the fund. One considered especially important is the payment of a dismissal wage or some added compensation when employees are permanently discharged or are off the pay roll for an extended period. The plan in the past is said to have helped in stabilizing employment and should be continued so that there will be an incentive for management to maintain this condition, but it is felt that one of the more important features should be to cover extended lay-offs.

The Columbia Conserve Co., Indianapolis, Ind.

The employment-guaranty and profit-sharing plan of The Columbia Conserve Co. was started in April, 1917, and at the same time a works council was organized. Up to 1925 the workers in the company were on a profit-sharing basis, but no provision had been made by means of which the Columbia workers would come into ownership of the business. In that year, however, a new contract was drawn up which provided that the balance of the profits after certain payments were made, including a limited dividend on the capital stock, should be used to buy the common stock of the company. This stock was to belong to the employees. By June, 1930, the employees had obtained more than 50 per cent of the stock and since that time the workers, through the works council, have assumed full control of the business.

The regular employees of the company are on a salary basis, and under normal conditions all office and factory workers are guaranteed full salary for 52 weeks, including vacations; while wage earners, who consist of workers who are hired at the peak of the canning season and others who for some reason have not qualified for the salary group, are guaranteed employment for 50 hours a week at a fixed hourly rate during the period of their employment.

The company had been little affected by the depression until the spring of 1931, but at that time the firm began to experience economic difficulties as a result of decreased sales. As a consequence the worker-owners of the company voted to leave 50 per cent of their salaries in the company until the financial situation became easier, and in June, 1931, began the plan of paying half the salary to each employee and crediting the other half on the books for an indefinite period. In October, 1931, the policy was changed to provide for the establishment of a sinking fund of 20 per cent of salaries to be used as a reserve against an operating loss at the end of the year. Prior to this change salaries had been increased from 50 per cent to 60 per cent and later to 70 per cent of the normal amount. After the 1st of January, 1932, however, it became apparent that because of the continued decrease in sales this sinking fund would have to be used to offset the operating loss. It was proposed, therefore, that instead of continuing to set up this fund, amounting then to about \$25,000, as a sinking fund, it should be charged off the books, and salaries should be reduced by 20 per cent for an indefinite period. Shortly after this decision was taken it was decided to pay deferred salaries in preferred stock, but later, on July 1, 1932, the council decided to cancel

the deferred salaries, amounting to about \$13,000, with the provision that in the future any action towards repayment which might seem equitable might be taken. In the meantime another reduction of 20 per cent in salaries had become necessary, making the actual salaries 64 per cent of the nominal salaries in the summer of 1931. In addition to these salary cuts it was decided in May, 1932, that whenever the cash receipts in any one week were not sufficient to take care of outside obligations for materials and services as well as the pay roll, instead of deferring the salary payments the pay roll should be passed entirely. It became necessary to pass a pay-roll period about the middle of June, and it was said that it was probable that several more would have to be passed in the months of July and August.

The average number of salaried workers during the first half of 1932 was 131, as compared with an average of 140 from April 1 to December 31, 1931. The total pay roll of salaried workers from April 1, 1931, to December 31, 1931, was \$176,282.29 and from January 1 to June 30, 1932, \$77,186.12.

In an account of this experiment in industrial democracy by Mr. W. P. Hapgood, one of the former owners of the business and now part owner, the writer says that from his outline of the financial condition of the company and the steps taken to protect its financial structure it might appear that the action taken by the council at different times through the period of depression did not meet much opposition, but as a matter of fact there was very great opposition in the beginning of each discussion, though before it was closed in each instance most of those who had opposed the plan supported it. Mr. Hapgood says further that "it is of course not surprising that there is opposition to any reduction in incomes, no matter how large those incomes may be, and in our case our incomes were not large. It was unfortunate that reductions were necessary, but it is quite as important for a group of workers who own a business collectively to make reductions in salaries as it is for an individual owner in order to balance the business budget. The difference between the two methods is that in industry in general the owner reduces all other salaries before his own. In our case we all suffer together."

Dutchess Bleachery (Inc.), Wappingers Falls, N. Y.

The unemployment-insurance fund of the Dutchess Bleachery (Inc.) was started in 1919 as part of the profit-sharing and partnership plan which had been instituted the preceding year. The fund, as originally planned, was to be maintained from the net profits of the company. The plan provided that a sum should be set aside at the end of each year, which should be sufficient to raise the capital sinking fund to an amount equal to 6 per cent on the invested capital, after which a further sum should be set aside to raise the sinking fund to be drawn upon by labor in times of unemployment to \$85,000. Both of these funds were to be so raised before the division of any profits. The unemployment fund was to bear interest at 6 per cent and this interest was to be paid into a fund for the payment of sick benefits as long as the fund was in excess of \$50,000. Payments into the fund between the years 1920 and 1922 amounted to more than \$93,000, but no payments have been made since that time, as there has been no surplus after deducting the amount for the capital sinking fund and the fund

has gradually been reduced until on June 30, 1932, it amounted to \$15,249.70.

The plan provides for the payment of benefits for time lost on account of lack of work. The benefit amounts to half pay for a minimum of 24 hours per week, when working from no hours up to 13 hours per week; in case of employment for more than 13 hours, the benefit is half the difference between the time worked and 35 hours. The unemployment benefit is based on the average weekly wage for time workers and on the average of the preceding month for piece workers. Originally, employees received benefits from the beginning of unemployment, but the plan provided that when the balance in the fund dropped below \$50,000 the first 13 hours of lost time should not be compensated. There is no limit to the benefit period as long as there is any money in the fund.

The average number of employees in the plant during 1931 was 367, and during the first half of 1932, 344; of these about 75 per cent in each year were covered by the plan.

The total amount of benefits paid from January 1 to June 30, 1932, amounted to \$1,166.41.

The manager of the company states that although it is impossible to estimate with any degree of certainty the effects of the plan in keeping up the plant morale during the depression, the company feels that it has been of assistance in this respect and in furnishing a certain amount of financial aid to the workers. No changes in the plan are contemplated.

Crocker-McElwain Co. and Chemical Paper Manufacturing Co., Holyoke, Mass.

The employment-guaranty plan of the Crocker-McElwain Co. and the Chemical Paper Manufacturing Co. was instituted in 1920, and until the present depression 52 weeks' employment at full pay was guaranteed to workers having five years' service with the company. The plan was amended in February, 1931, to cover only 44 weeks of guaranteed employment and up to 80 per cent of the earnings instead of full-time earnings. The pay roll of the companies is divided into 13 periods of four weeks each and the unemployment benefit is adjusted on the basis of these pay periods. If an eligible employee is completely unemployed during any pay period except the periods falling in July and August, he is paid 80 per cent of his regular wage rate. Any extra earnings for overtime during any pay period are balanced against short time in the same period. During the seventh and eighth pay periods, which fall in July and August, employees are paid only for the time actually worked. While formerly unemployment payments covered 80 per cent of unemployment within the specified pay periods, it became necessary to change the guaranty from 80 per cent to 50 per cent, effective February 1, 1932. No other features of the plan were changed, however.

At the time the bureau's former study was made the company had drawn up a tentative plan which would provide for employees having less than five years' service, through the formation of a fund which the company would maintain for the payment of unemployment benefits. Because of the unprecedented conditions prevailing since that time, however, the company has found it advisable to hold the plan in abeyance.

John A. Manning Paper Co. (Inc.), Troy, N. Y.

The unemployment-benefit plan of this company, adopted in 1922, is associated with a definite stabilization policy which was so effective, prior to the present crisis, that only rarely was the payment of unemployment benefits necessary. The two plants of the company covered by the plan are completely unionized, with the exception of men who may be taken on for construction work involving temporary employment and who are not required to join the union. The original plan provided for the payment of an unemployment benefit when the company was unable to furnish work of some kind which would yield wages at least equal to the amount of the benefit, the cost being borne entirely by the company. Benefits up to \$9 per week were paid, with the maximum for any calendar year fixed at \$72. This plan was superseded April 1, 1931, by a plan which contemplated a system of joint contributions by the company and the employees. The plan as drawn up was to guarantee a minimum of 4 days' pay per week to each operating employee for a period determined by the amount the individual had contributed to the fund, plus interest at 4 per cent. Payments of 1 per cent of each operating employee's wages, matched by the contribution of an equal amount by the company, were to be paid into the fund. Up to the present time no payments have been made by the employees and no fund has been accumulated, but the company is contributing its share by giving the men at least 3 days' work per week but paying them $3\frac{1}{2}$ days' wages, thereby meeting its own obligation of a half a day on a minimum of 4 days' wages per week, while the men stand the loss of the other half day's pay.

The average number of employees in 1929 was 355 and the number of employees covered by the plan was 335. No benefits were paid in that year. In 1930 there was an average of 325 employees and 305 covered by the plan. In that year \$1,437.60 was paid in benefits to 23 employees, part of this amount being paid as a dismissal wage. In 1931 and 1932 all the employees were covered by the plan, the average number of employees being 258 in 1931 and 203 in the first half of 1932. Forty-two employees received benefits amounting to \$3,009.20 in 1931, and 67 received \$4,770.80 in the first six months of 1932. The company's contribution toward meeting the 4-day minimum weekly wage was \$7,581 in 1931 and \$3,337 in 1932.

Behr-Manning Corporation

This company has maintained an unemployment-benefit plan since 1922, which has been associated with a definite policy for stabilizing employment. No unemployment fund is maintained by the company; but if work can not be furnished, employees are paid \$9 a week for a maximum of 8 weeks in the year. Employees who are laid off have the option of taking the unemployment benefit or of being paid a discharge bonus. If the unemployment benefit is chosen, the employee remains on the rolls and is in line for reemployment when workers are again needed. The regular working hours in the plant are 48 per week and one shift per day is worked. During the past year the hours were reduced first to 44 hours per week; in May, 1932, to 35; and in August, to 31 per week. Not more than

6 men had been laid off during the year, so that the unemployment benefits had been negligible. The average number of employees in the spring of 1931 was about 240.

S. C. Johnson & Son, Racine, Wis.

The unemployment-benefit plan of S. C. Johnson & Son was established in 1922 for office workers, salesmen, and shop employees. The plan is linked with the mutual-benefit association of the company and membership in the plan is automatic for all members of the association. The plan provides for the payment of benefits if an employee is involuntarily out of work. No waiting period is required before benefits are paid, but the smallest unit of lost time for which benefits may be paid is half a day. The benefits amount to \$1 per day for the first 100 days and 50 cents per day for the second 100 days for members who earn \$75 a month or less, \$2 and \$1, respectively, for members earning \$75 to \$200, and \$4 and \$2, respectively, for employees earning \$200 or more. The cost of the plan was originally borne entirely by the company and no reserve fund was set up, payments being made from the general funds of the company. Since the depression, however, the plan has been changed to provide for equal contributions by the employees and the company.

Up to the first of July, 1932, the amount paid out in benefits had been very small, only 30 employees receiving benefits amounting to \$71 in 1929 and the same number receiving a total of \$227 in 1930. In 1931 no benefits were paid, but in February, 1932, 17 persons received \$158, and in July, 1932, 336 employees received a total of \$3,750. The average number of employees has varied only slightly since 1927, ranging from a maximum of 364 in 1930 to an average of 342 in the first seven months of 1932. Since February 1, 1932, the regular working hours have been 40 per week instead of 44 as formerly, but beginning September 19 the production department was placed on the 4-day week. In order to conform with the Wisconsin unemployment insurance law, the company has drawn up an unemployment-benefit plan and submitted it to the Wisconsin Industrial Commission for approval, but the plan had not yet been accepted at the beginning of October, 1932.

Leeds & Northrup Co., Philadelphia, Pa.

The unemployment-benefit fund of the Leeds & Northrup Co. was established in 1923, when an initial sum of \$5,000 was set aside and company contributions amounting to 2 per cent of the total weekly pay roll into the fund was begun. The plan provided that these payments by the firm should continue until the deposits and accumulated interest currently brought the fund to an amount equivalent to twice the maximum weekly pay roll in the preceding 12 months. Under the plan, employees normally earning \$2,600 or less per year were eligible for unemployment benefits after three months' employment with the company, if they had not signed a written statement that the employment was temporary. If employees were laid off on account of lack of work, they were paid 75 per cent of their wages or salary for the normal working week of 44 hours, exclusive of the attendance bonus, if they had dependents, and 50 per cent if without dependents. The benefits were based upon length of service, varying

from a benefit of 3 weeks for 3 months' service to a maximum of 26 weeks for 5 years' service and over. If the hours were reduced below the normal working week, benefits against lost earnings were paid to the same proportion and for like periods without impairing an employee's right to full benefit if subsequently laid off. The fund was placed in the Germantown Trust Co., which acted as trustee, and it was administered by an unemployment-fund committee, made up of three members representing the workers' council and two members representing the company's executive committee, appointed annually.

The number of employees grew steadily from an average of 380 in 1923 to an average of 1,114 in 1930. In 1931 the average was 965, and in the first half of 1932 employment had fallen to an average of 603. During these years the average number covered by the plan ranged from 291 in 1923 to 927 in 1930. In 1931, 828 employees were eligible under the plan; in the first six months of 1932, 531. During the 10 years since the fund was started the company has contributed \$74,793.89, to which was added \$22,442.81 in interest earned on the fund. The administration costs during the period amounted to \$2,986. The benefits paid from the fund up to 1930 amounted to only \$505.29, but from 1930 to July, 1932, \$86,760.53 was paid in benefits, and in addition \$6,871.75 in employee loans was taken over by the company so that but \$113.13 remained in the fund at the close of the first half of 1932, virtually closing out the fund and completing its first cycle.

In reply to an inquiry as to the effects of the plan upon plant morale and the extent to which it has been of assistance to employees during the depression, the following statement was made by an official of the company:

It is safe to say that both management and workers appraise the plan as having been beyond the value of the mere money involved. The amount of benefits given to 870 employees during the period is without doubt the best index of the extent to which the fund has aided employees by cushioning the shock and giving them time to relocate. As previously stated, the company regards the principle so highly that in due time a new reserve undoubtedly will be set up; and while the management has not given specific thought to provisions which conditions will dictate, it is most likely that if any changes are made they will be in the direction of conserving or increasing protection for major emergencies in such ways, perhaps, as a waiting period, making benefits for part time less liberal, increasing the fund in relation to current pay roll (which could easily have been done over the period 1923 to 1930 without increasing the rate), and investigating the possibility of employee contributions, the more surely to increase the duration, if not the rate, of benefits.

Procter & Gamble Co., Cincinnati, Ohio

The employment-guaranty plan of the Procter & Gamble Co. covers employees in the factories at Ivorydale and St. Bernard, Ohio; Port Ivory, Staten Island, N. Y.; Kansas City, Kans.; St. Louis, Mo.; Baltimore, Md.; and Hamilton, Ontario. The company has shared profits with the employees since 1886; in 1903 the profit-sharing plan was changed to cover only employees who subscribed for stock; and in 1923 an unemployment-guaranty plan was put into effect which was effective for certain of the employees included in the profit-sharing plan. All hourly-paid factory employees who have been profit sharers for at least six months are eligible for the employment guaranty. The plan guarantees employment for all eligible employees at full pay for 48 weeks in each year, or such part of the year as re-

mains after an employee's eligibility is established. The guaranty does not cover the periods in the summer and in December when the plants shut down for cleaning and repairs nor does it cover payment for holidays. The company reserves the right, under the plan, to transfer an employee to work other than that at which he is regularly employed. If the transfer is the result of a temporary cessation of work in his department, he receives his regular hourly rate of wages, but if the transfer is in the nature of a permanent change, he receives the rate which prevails for the work to which he has been transferred. The cost of maintaining the employment guaranty is financed by the company and charged as a direct cost against manufacture.

The original plan was based on a 50-hour week and the guaranty covered the full working week. As a matter of protection in the event of an extreme emergency, however, the employees were notified in February, 1932, that effective August 23, 1932, the company would reserve the right to limit the hours of work in any department within a given factory to 75 per cent of the established week (then 50 hours). It is not the intention of the company, however, to exercise this right unless a serious emergency arises. On October 4, 1932, the employees were notified that the company would operate on a 5-day-week basis, or an established week of 45 hours. This action was taken because of the company's desire to participate in the nation-wide movement for spreading employment. The reduction to 75 per cent of the regular working time had not been put in effect up to October 24, and the company expected at that time that it would not be necessary to do so during the remainder of the present business depression. In the period since April, 1931, there have been no lay-offs of hourly paid profit sharers, since, of course, the plan precludes such lay-offs, although these employees may be discharged for cause.

The statistical procedure of the company has been somewhat revised this year so that the figures for the average number of employees and the number covered by the plan are not strictly comparable with the earlier figures published. The method of collecting enrollment statistics was changed May 1, 1932, to include all hourly paid factory workers, clerical employees, and the technical, supervisory, and executive staffs. Prior to that time, salaried employees above a certain grade were not included in the figures. The revised figures show that in May, 1932, the average number of employees was 5,636, and in August, 5,475. The number of employees covered by the plan in the same periods was 3,469 and 3,421, respectively. The index of total pay roll in August, based on the average for 1926, was 110.4. There have been comparatively small fluctuations in the number of employees during the depression and as stated before no lay-offs of profit sharers have been made. The company states that in spite of the fact that it has been necessary under the plan to carry a surplus force at some of the factories the experience with the guaranty of employment has increased the conviction of the firm as to its desirability.

Brown & Bailey Co., Philadelphia, Pa.

The unemployment-benefit plan of the Brown & Bailey Co. was established in November, 1927, and the establishment of the fund, which consisted of a first payment by the company of \$2,500, was begun at that time. In December, 1929, the fund had reached the

amount considered necessary for its operation, but no payments from the fund were made until April 2, 1930. The plan provided for the payment of benefits for unemployment arising from slack business but not for unemployment resulting from any other cause, and in computing the normal wage, lost time from strikes, fires, or similar causes was deducted from the time of the full working week. All the employees except salaried workers and foremen were eligible for unemployment benefits without regard to length of service. It was the company's practice in times of business depression to retain its full working force and run the factory on short time, and when the plan was started it was provided that whenever the weekly earnings fell below 80 per cent of the normal earnings a supplementary payment from the benefit fund should be made which would bring the wages up to that amount. As a result of the depression, however, beginning with the pay-roll week ending June 26, 1931, the percentage was fixed at 75 per cent of normal earnings. Bonuses are not included in computing the normal earnings, but unemployment benefits are based on the regular rate for workers on an hourly basis, and for workers on a piece-rate basis on the average earnings for the last four weeks of full-time employment. Up to the time the fund began to function the company contributed about \$7,500, which was approximately twice the maximum weekly pay roll in normal periods. (The firm normally employs about 135 persons.) When this sum was reduced below that amount through the payment of benefits, the company agreed to pay into the fund 2 per cent of each weekly pay roll until it was restored to the original figure. Although the original plan provided for contributions by the firm only, the employees, after some experience under the plan, requested through their elected representatives on the shop council that they should be allowed to contribute 1 per cent of their weekly pay when the amount in the fund should fall below \$5,000. The foremen, also, although on a salary basis and not benefiting by the plan, asked to be allowed to contribute and were accordingly assessed \$1 per month.

The firm has attempted for several years to stabilize employment through developing a steady demand for its product by means of advance orders from customers covered by long-term contracts and by reducing to a minimum the hiring of temporary workers. The benefit plan, however, was not able to withstand the effects of the depression and was discontinued January 1, 1932.

In detailing the experience of the company under the plan, Mr. Brown, the head of the firm, said that the capital fund set up to take care of the benefit payments was not based on any depression as long and as severe as the present one but rather on such depressions as had come upon the United States in the past 30 years. While the fund took care of all the employees during 1930 and 1931, it was exhausted at the end of the latter year and the company was forced to discontinue the plan. However, the company is very much pleased with the operation of the plan and hopes to reestablish it when prosperity returns. It is apparent, though, that either the capital sum must be largely increased or the guaranty must be reduced from 80 per cent. A new plan established on the basis of 70 per cent and supported by a larger capital fund, it is considered, would take care of the factory workers in future depressions. The plan is said to have been of inestimable value to the employees during the two years it was in

operation, in the financial assistance afforded them and in the maintenance of morale in the factory.

One point is particularly emphasized, namely, that during depressions there is an almost irresistible tendency among workers to slow up production so as to make the work in sight last longer. It is only natural that this should be so, and industrial engineers with wide contacts have said that in all plants the production of the workers falls off during depressions. In this company's plant this did not happen while the unemployment insurance was in effect; the worker knew that, if he kept up the usual production, when he came to the end of the job and had to be laid off the unemployment insurance guaranteed him 80 per cent of his normal full-time wages. Because of the tendency among factory workers to try to stretch out the work by loafing on the job, the costs of production go up in periods of depression when they really should go down, and Mr. Brown points to the fact that his company has found the unemployment-insurance plan a cure for the trouble as a very important point in favor of such a system and one which is not brought out generally in discussions on unemployment insurance.

Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.

The plan of this company, which was instituted in February, 1929, provided for compensating all permanent employees for an indefinite period for time lost from shutting down machines. The plan was in effect at the time the bureau's previous study was made, although it had been unnecessary to pay any benefits since June 8, 1929. The plan has been discontinued but the company expects to submit a plan to the Wisconsin Industrial Commission in accordance with the requirements of the Wisconsin unemployment insurance law. The day workers in this company have been on the 5-day week since October, 1931, and the shift workers are on a 6-hour day. The men are alternated on part time to spread the work and avoid lay-offs.

The Samarkand Co.

A plan for guaranteed employment was made effective during 1929 by the Samarkand Co., San Francisco, Calif. The plan, which guaranteed 52 weeks' employment, with two weeks' vacation at full pay for all regular employees, i. e., those who occupy regular stations in the establishment, was in effect until the first of November, 1932. At that time the guaranty for the immediate future was changed to 50 weeks, with two weeks' paid vacation, every member of the personnel also being required to take two weeks without pay in connection with his or her vacation. The plan is financed out of current income, and is administered in connection with other features of the industrial-relations program of the company. In 1929, when the company adopted the plan, the employees numbered 46, and in November, 1932, the number of employees was 53. A salary reduction of 10 per cent went into effect in November, 1931, but no further reduction has been made except the two weeks' reduction in the guaranty.

In commenting on the plan the president states that, regardless of the fact that the business of the company is seasonal and has been very seriously affected by adverse weather conditions during the past year, the company has steadfastly maintained the policy of providing

steady employment. There is no doubt, he says, that the regularization plan has been subjected to the severest test by prevailing conditions, but the company hopes to be able to continue the plan without further changes. While the costs of a program of this kind are definite and tangible and benefits are indefinite and largely prospective, it was found that there were certain benefits from the start. The labor turnover has been reduced to an absolute minimum, interest and industry have been stimulated, and the relations between the employees and the management, it is said, have been substantially improved. The average annual earnings of the employees, excluding the executives, for the 12 months ending the first part of November were \$1,670.76.

General Electric Co.

The General Electric Co. in 1930 adopted two different plans covering employment conditions in its different plants. The first—the unemployment-pension plan—was proposed to the 12 plants in which various types of electrical apparatus are manufactured, early in 1930. The second—an employment-guaranty plan—was put into effect in the 12 lamp works of the company on January 1, 1931. The unemployment-pension plan provides for payment for total or partial unemployment, for loans to unemployed workers not to exceed \$200, and for relief to any employee or former employee of the company who has been retired on old-age or disability pension or disability relief, after investigation by the administrators, and for such period as they may decide. Participation in the plan is voluntary on the part of the employees and any employee with continuous service with the company of one year or more is eligible to participate. The plan is financed normally by deductions from the employee's pay of 1 per cent if he is receiving 50 per cent or more of his normal earnings, and by the payment of an equal amount by the company. In times of abnormal unemployment, when contributing employees are temporarily laid off or are working part time and payments made from the trust for unemployment amount to 2 per cent or more of the average weekly earnings of contributing employees, the plan provides that the administrators will notify the company of this fact and normal collections from contributing employees will cease. Upon such notification the company will announce that an unemployment emergency has arisen and emergency payments will be made to the trust as long as payments from the trust fund amount to 2 per cent or more of the average weekly earnings of contributing employees and until the total of the trust is not less than 75 per cent of the previously attained maximum. The emergency payments are as follows: All those employed by the company at the particular works, and receiving 50 per cent and over of their average weekly or monthly full-time earnings, will be required to pay approximately 1 per cent of such earnings into the fund. This includes all the clerical and supervisory staff, as well as the highest officers of the company connected with the particular works. All the general and district commercial, general manufacturing, engineering, and administrative employees of the company at all offices in the United States not on a particular pay roll shall contribute their proportion of the 1 per cent, determined by the ratio of the number of the contributing employees of the particular works to the number of the eligible employees of all works of the company.

The plan adopted August 1, 1930, provided that no payments should be made to an employee until he had made normal contributions for at least six months. In the fall of 1930 it became evident that employees would need assistance before these preliminary payments were completed, and a special emergency was therefore declared December 1, 1930. Because it was necessary to put the plan into operation before a substantial fund could be accumulated, the following provisions became effective: All employees of the company, except those in the lamp department, who were earning 50 per cent or over of their normal pay were to contribute 1 per cent; payments were to be made only after the administrators were convinced the employee was in need of funds; and the maximum weekly payment was fixed at \$15 instead of \$20. Most of the time, the collections at each works from employees plus the company's equal contributions have been adequate for the disbursements authorized by the administrators. When the local collections have been inadequate, the deficit has been made up by drawing upon the amounts collected from the general administrative and district sales group.

A further modification in the plan was made November 1, 1931. All hourly rated employees then on the pay roll were assured earnings or benefits for the succeeding six months equal to half of normal pay (maximum payment guaranteed \$390, or 26 weeks at \$15). During the first four months of this period all employees earning 50 per cent or over of normal contributed 2 per cent of actual earnings and the company contributed an equal sum. For the last two months of the period contributions were 1 per cent. The board of administrators at each works decided what payments, if any, should be made to employees laid off for protracted periods, who had received the maximum amounts specified in the plan. The boards have also determined limits for payments to employees with short service and employees without dependents.

In 1930 the average number of employees was 78,380, including 8,000 employees in the incandescent-lamp plants. During the operation of the emergency plan, from December 1, 1930, to June 30, 1932, payments under the plan have been made to 23,796 employees. Under the six months' guaranty established November 1, 1931, the payments amounted to \$1,122,435, and the amount of all other benefit payments during the 19-month period was \$1,145,442. In addition, loans totaling \$329,905 were made, making a total expenditure for unemployment assistance of \$2,597,782, the average payment amounting to \$109. The balance in the fund June 30, 1932, was \$572,188.

The other welfare plans of the company affect the economic situation of the employees. Thus, approximately 33,900 employees hold bonds of the G. E. Employees Securities Corporation, paid for in whole or in part to a value of \$43,471,870 and yielding 8 per cent return. At the end of 1931 approximately 62,000 carried life insurance obtained through the company, totaling \$171,000,000, \$73,000,000 of which is free insurance. In the past three and one-half years 50,037 employees set aside for additional pensions \$4,098,382 through payments of 1½ per cent of earnings.

During the present emergency, the company states, the unemployment payments have been of material assistance in helping the employees meet the employment situation. Among the 23,796 employees

who have been aided while laid off or on short time are many who hold the bonds previously described or are buying their own homes with company assistance, and help from the unemployment fund has made it possible for many to get along without sacrificing these assets. The company wishes to emphasize the fact that the plan is experimental as yet, and that it doubtless will be changed to harmonize with the mutual unemployment-benefit plan recently adopted by the National Electrical Manufacturers Association.³

As a result of a study of the possibilities of stabilization of work and guaranty of employment in the incandescent-lamp department of the company in 1930, a plan guaranteeing 50 weeks' work of not less than 30 hours each to employees having two or more years of service was put into effect for the year 1931. For 1932 this was modified to a guaranty of 1,500 hours during the year. Participation is optional and employees who choose to accept the guaranty authorize the company to withhold 1 per cent of their earnings, which is deposited to their credit. The company guarantees 5 per cent interest, and the savings, including interest, belong to the employees, being paid to them upon leaving the employ of the company, to their beneficiaries upon death, or as an increase in the pension upon retirement. The company payments to the fund in 1931 amounted to \$25,000, and the employees' savings to \$40,930.

Joint Company Plan, Fond du Lac, Wis.

A cooperative plan for guaranteeing employment and paying unemployment benefits was put into effect September 1, 1930, by the Sanitary Refrigerator Co., the Northern Casket Co., and the Demountable Typewriter Co., all of Fond du Lac, Wis. The plan, which was amended in certain particulars September 1, 1931, covers all factory and office employees of the companies between the ages of 21 and 60 who have been employed continuously for one year, with the exception of salesmen and those in managerial positions. Employees are entitled to receive steady employment or, when employment can not be provided, to participate in the cash unemployment benefits for the period of unemployment, but not to exceed 100 working-days in the year. Cash unemployment benefits amount to 65 per cent of the average earnings during the year preceding unemployment but are not paid for the first 15 days of unemployment. Employees who are laid off are required to accept any worthwhile wage-earning employment which may be offered them, but the original employing company is not released from providing unemployment benefits until 100 days of such employment have been provided within one year from the date of the original lay-off. Each of the companies maintains and administers its own unemployment fund, which is supported by contributions by the employer of \$1 for every \$100 paid in wages each month.

Employment in the Sanitary Refrigerator Co. and the Northern Casket Co. had shown little change throughout the 22 months in which the plan had been in effect when this report was made. In the first company the average number of employees in the last four months of 1930 was 110 and in the first six months of 1932, 116,

³ See Monthly Labor Review, July, 1932, p. 22.

while the figures for the same period in the Northern Casket Co. were 120 and 118, respectively. In the Demountable Typewriter Co. there was a drop in the number of employees from 100 to 74 in the same period. The number of employees covered by the plan had increased substantially in the first two companies and slightly in the last. The amounts in the funds of the different companies on July 1, 1932, were, respectively, \$2,939.65, \$2,085, and \$1,536.09. For the three plants during the entire period there was an aggregate of about 50 weeks of unemployment and \$425 was paid in cash benefits. The plan is said to have had an excellent effect on plant morale and the cash benefits which have been paid have been much appreciated by the workers. The companies will continue the present plan until July 1, 1934, when a new plan conforming to the official State plan will become effective.

Rochester (N. Y.) Unemployment-Benefit Plan

The plan known as the Rochester Unemployment Benefit Plan was adopted in February, 1931, by 14 manufacturing establishments in Rochester, N. Y. Since that time five other companies—the J. Hungerford Smith Co., Pulver Co., Leary Cleaning & Dye Works, Sullivans Baby Shoe Manufacturing Co., and Stecher Lithographic Co.—have been added to the list of adopting companies. These 19 companies in normal prosperous times employ approximately 28,000 persons, or 40 per cent of the industrial employees of Rochester. The plan provided that in order to accumulate sufficient reserves, benefits should not become payable until January 1, 1933, and the continuance of the depression has not permitted the companies to advance the date of actual operation of the plan.

J. I. Case Co., Racine, Wis.

A plan for the creation of an individual reserve fund, to be drawn upon by employees participating in the plan during periods of unemployment due to general business depression, was put into effect in the plant of the J. I. Case Co., at Racine, Wis., in November, 1931.⁴ The plan calls for the establishment of a reserve equal to one year's average full-time earnings of each employee, formed by joint contributions by the company and eligible employees. Five per cent of the semimonthly pay is contributed by the company and the employees until the reserve is equal to the average full-time earnings of each employee for six months, after which the contributions in each case will be 2 per cent until the full sum is accumulated. Contributions cease temporarily, however, whenever an employee has had less than 70 hours' work in any semimonthly pay-roll period. Contributions are discontinued when the full reserve is accumulated but are resumed whenever the reserve is reduced, through withdrawals, below this amount. The plan is applicable to all employees of the Racine factory working on an hourly or piece basis who have been in the employ of the company continuously for a period of six months and whose service has been satisfactory. Withdrawals from the fund are permitted only during periods of business depression when the company can not furnish sufficient employment and the employee is unable to secure

⁴ See Monthly Labor Review, March, 1932, p. 554.

employment elsewhere. Payments from the fund may not exceed 40 per cent of the average semimonthly earnings of the employee during the preceding 12 months. Withdrawals from the fund are also allowed in case of permanent disability and, in case of death, the total amount in the fund to the employee's credit is paid in semi-monthly installments to the widow or dependent minor children.

Reporting upon the experience under the plan during the brief time it has been in existence, the company states that every eligible employee has subscribed to the plan and the total number of employees included is slightly less than 1,200. As the plan was inaugurated during the period of extreme depression, the reserves formed by the employees' and the company's contributions are very far below the amounts they would have reached under normal conditions. The total contributions, as of July 1, were approximately \$20,000, while in normal times the fund would have amounted to over \$250,000 or \$300,000 during the seven months' period. Against the reserves in the trust fund three death benefits have been paid to widows of deceased employees and there have been 29 withdrawals from the fund by reason of unemployment.

Minnesota Mining & Manufacturing Co., St. Paul, Minn.

The unemployment-benefit plan of the Minnesota Mining & Manufacturing Co. was placed in operation January 1, 1932.⁵ All employees of the company are eligible for benefits if they are participating in the insurance and pension plans of the company, have at least three years' service with the company, and are earning less than \$45 per week. The ordinary costs of the plan are met from a fund made up of contributions by the employer of an amount not to exceed 2 per cent of the annual pay roll, supplemented in emergencies by contributions by the employees ranging from 0.8 per cent for workers with incomes of \$800 to 2.5 per cent for employees earning \$2,500, and up to 10 per cent for employees earning \$10,000, these amounts being matched by the company. Benefits to employees laid off because of slack work are paid at the rate of 60 per cent of the first \$10 of normal earnings plus 20 per cent of earnings in excess of \$10. Five per cent of the total benefit is added for each year of service over three years. The duration of the benefit payments depends upon length of service, ranging from 10 weeks to employees of 3 to 4 years' service up to 17 weeks for 10 years and over.

At the time the plan was put into effect the plant was down to a minimum pay roll and was operating on a 5-day basis. Approximately 540 employees were covered by the plan. A report by the company states that for the 6-month period, January 1 to July 1, 1932, there had been no occasion to pay any benefit. The depression had not affected the business to such an extent that it had been necessary to close the plant for more than one and one-half days per week; and as the plan calls for a minimum operation of the plant of two days per week, there had been no necessity for benefit payments. If the business gets no worse, it was considered probable that the firm would be able to provide work in excess of the minimum days for all the employees for the rest of this year.

⁵ See Monthly Labor Review, April, 1932, p. 788.

Joint Agreement Plans

Men's Clothing Industry, Chicago, Ill.

THE joint agreement between employers and the Amalgamated Clothing Workers of America in the Chicago market provides for an unemployment-insurance plan for union employees engaged in the production of men's clothing in union shops. The agreement providing for unemployment insurance was signed in 1923 and payments into the fund were first made in that year. Union members who are employed in shops covered by the agreement are required to participate in the plan. Contributions to the unemployment-benefit fund amount to $1\frac{1}{2}$ per cent of the earnings of the union members, while employers contribute at the rate of 3 per cent of the pay roll. In order to be eligible for benefits members must be in good standing in the union, must be registered in the union employment office, and have paid regular contributions up to 10 payments for each week to each week and a half of benefit payable (depending upon the number of weeks granted in the particular shop where the person is employed). In order to receive benefit a member covered by the plan must be unemployed involuntarily, he must not have refused suitable employment, must not have exhausted his right to benefit, and must not be on strike nor involved in a lockout. The benefits paid amount to 30 per cent of full-time wages, with a maximum payment of \$15 per week. Full-time wages are defined as the earnings in a full 44-hour week, computed from the actual earnings in the four busiest weeks in the previous season. A waiting period of 44 hours is required before persons can receive benefits. In calculating this lost time every hour lost in a given week is counted unless the worker earns \$50 or more, or unless he is out of work voluntarily. Overtime hours cancel the same number of hours lost, the calculation being made for the whole season. The maximum benefit period allowable in any season is $3\frac{3}{4}$ weeks, but actually benefits are not paid for more than 3 weeks in any one season. The duration of the benefit period is fixed by the respective boards of trustees and the impartial chairman and benefits are paid approximately as follows: For 3 weeks in the smaller inside shops, for 2 to $2\frac{1}{2}$ weeks in the majority of shops, and for 1 to $1\frac{1}{2}$ weeks in a small number of shops. A person may receive benefits for only 1 week for every 10 contributions to the fund in a given season if he works in a shop where benefits are granted for 2 to $2\frac{1}{2}$ weeks, and for 1 and $1\frac{1}{2}$ weeks for every 10 contributions if he works for a firm which grants 3 weeks of benefit. Eligibility to receive benefits is restored at the beginning of a season. The contributions of contractors and their employees are pooled in a single fund and administered for the benefit of the employees of all the contractors. The contributions of each inside-shop employer and his employees are handled as a separate fund for the benefit of the employees of that particular shop. There are six funds administered by trustees, the same union representatives and the impartial chairman serving on all the boards of trustees. There is no provision for the maintenance of a reserve in the different funds, but it is the practice to keep an amount equal to one season's benefit payment in each fund.

Because of the continued unemployment of members who had exhausted their rights to benefit, special benefits were paid in 1930 and

1931. In 1930 the benefits were paid for a maximum of four weeks at the rate of \$10 per week. Late in 1930 and in 1931 special assessments amounting to \$8 per person for those who were working allowed the payment of additional benefits to unemployed members. These payments were made, to members who had been out of work for three months or longer, at the rate of \$5 per week for single persons and \$7.50 for married persons.

The number of firms covered by the plan in December, 1926, was 206 and the number of union members covered was 19,000. In April, 1931, the number of firms had been reduced to 142 and in May, 1932, to 106, while the number of union members covered during the past two seasons was approximately 13,500. For the season November, 1930, to May, 1931, there were 13,266 claims paid, the total benefits amounting to \$352,297.81. From May, 1931, to November, 1931, the claims numbered 12,795 and the benefits paid amounted to \$307,072.50, while in the season November, 1931, to May, 1932, the figures were 12,000 and \$254,098.26, respectively. The average benefits ranged from \$26.55 in the season ending in May, 1931, to \$21.17 for the season ending in May, 1932. The balance in the fund at the end of the last season was \$424,314.45.

Men's Clothing Industry, New York City

The joint agreement providing for a system of unemployment benefits, which was adopted in 1928 by the employers manufacturing men's clothing in New York City and the Amalgamated Clothing Workers of America, was renewed on July 1, 1931, for a period of two years. The plan provides that union members on the pay rolls of employers who are parties to the agreement are automatically covered by the plan. No contributions are required from employees; the plan is financed entirely by inside-shop employers' contributions equal to 1½ per cent of the total union pay roll in their establishments, and in addition the manufacturers are required to contribute 1.2 per cent of the amounts paid to contractors. All payments are deposited in a common fund, which is administered by a board of trustees composed of three representatives of the union, three of the employers, and the impartial chairman acting as chairman, and also in part by a director, associate director, manager, and counsel of the fund. As the unemployment-benefit plan was started such a short time before the depression set in there was not time to build up a reserve and therefore no actual reserve has been set aside, although a balance has been maintained in the fund. A person is eligible for benefits if he is involuntarily unemployed on account of lay-off or short time and if he is in good standing in the union, although during the depression members have been considered in good standing even though far in arrears in their dues to the union. The maximum benefit allowable under the plan is \$30 in each benefit period, or a total of \$60 for the two benefit periods in the year. The benefits amount to \$10 per week for a maximum of six weeks in any one year.

The number of firms covered by the plan in 1928 was 400, rising to a maximum of 430 firms in 1929 and dropping to 390 in September, 1932. The number of union members was approximately 25,000 in 1928 and 1929 and approximately 22,000 from April, 1930, to September, 1932. The number receiving benefits in 1929 ranged from 3,300

in April to 6,400 in November; in 1930 the figures were 8,700 and 9,000 respectively; in April, 1931, 6,000 received benefits; and from October, 1931, to September, 1932, 8,600. The total benefits paid from 1928 to September, 1932, amounted to \$700,000, the average benefit ranging from \$22.72 in the season ending in April, 1929, to \$15 in the different periods in 1931 and 1932. The balance in the fund available for distribution in benefits in September, 1932, amounted to \$90,044.11. The administrative expense is about 10 per cent and the funds for this purpose are kept in a separate account.

Men's Clothing Industry, Rochester, N. Y.

The joint agreement signed in 1928 by a group of men's clothing manufacturers, members of the Clothiers' Exchange of Rochester, N. Y., and the Amalgamated Clothing Workers of America provided for the establishment of a fund for the payment of unemployment benefits. Payments into the fund were first made July 1, 1928, and the first regular benefits were paid May 1, 1930. In order to be eligible for benefits a worker must have been in good standing in the union for at least one year immediately prior to applying for the benefit. Contributions of 1½ per cent of the weekly earnings of each of their union employees by the employers have been the only source of funds. The agreement provided that employees should contribute 1½ per cent of their weekly earnings, also, beginning May 1, 1929, one year after the agreement went into effect, but by mutual consent of the employers and the union the employee contributions have been waived until such time as economic conditions will warrant these payments. Persons receiving benefits must be involuntarily unemployed and must not have refused suitable employment nor have exhausted their right to benefit. The benefit rate and period are subject to revision each season according to the amount of money available in the fund. The benefit period in the season ending December 1, 1930, was 2½ weeks and the maximum amount of benefits a person might receive in a season at that time was \$31.25. During the season ending June 1, 1932, the benefit period was reduced to two weeks. This is the only change which has been made in the plan since the last report. In 1930 there were approximately 8,000 union members covered by the plan, and in the last season of that year \$115,000 was paid in benefits. Information as to the number entitled to benefits and the disbursements for 1931 and 1932 was not available.

Women's Garment Industry, Cleveland, Ohio

The agreement concluded in 1921 between employers, both proprietors of inside shops and proprietors of contract (outside) shops, and the International Ladies' Garment Workers' Union provides for a certain amount of guaranteed employment and for the payment of benefits if the guaranteed employment can not be furnished. Union members working in shops in which the employer is a subscriber to the plan are automatically covered by the agreement. Nonunion workers in inside shops are also entitled to unemployment pay from the "10 per cent funds" of their respective employers, but nonunion workers in outside shops are not entitled to this protection. The employers pay the entire cost of unemployment benefits, and for this purpose the employers of inside shops are liable for a sum equal to

10 per cent of their direct labor pay roll. No reserve fund has been built up, as unused contributions of inside-shop employers are returned to the employers if not required in a given year. In 1928 a separate fund was set up for contract shops and for peak workers whom the employers had been authorized to employ in busy seasons. For this purpose inside-shop employers are assessed 2 per cent of the pay roll for piece workers and 1 per cent of the pay roll for week workers, and contractors (outside-shop employers) are assessed 2 per cent. Benefits to inside-shop employees amount to one-half of the guaranteed union scale in each craft for a number of weeks equal to the difference between 1,600 hours, or approximately 38 weeks (the number of weeks guaranteed), and the number of weeks worked, provided the total benefits paid do not exceed the amount paid in by the employer. Theoretically, peak workers and workers in contract shops should be paid on the same basis, but the funds have never been sufficient to pay for all the unemployed time of these workers. No worker is entitled to benefits until he has been unemployed for 14 weeks. Inside-shop workers are paid benefits weekly when these are due, but payments are made to peak workers and outside-shop workers three times a year only, i. e., the first week in July, the first week in October, and the last week in December. The plan is administered by a board of referees under the direction of the impartial chairman, who holds the bonds of the inside-shop employers which are given in lieu of money to cover the amount of their liability. The fund for peak workers and contract-shop workers is distributed pro rata to persons entitled to benefit.

Information as to receipts and disbursements for 1932 are not available, but during 1931, 9 employers made contributions amounting to approximately \$77,000. The total benefits paid amounted to \$3,653.78. In 1930, 12 employers were covered by the agreement and \$7,752.05 was paid in benefits. Twenty-five employers made contributions to the fund for peak workers and contract-shop employees in 1931, amounting to \$12,823.59. The entire amount was paid to approximately 275 persons. For the July, 1932, payment, 10 employers contributed \$1,442, which was paid to approximately 180 persons, thereby exhausting the fund for that period.

Cloth Hat and Cap Industry, New York City

There has been a joint agreement since 1924 between employees and the members of the Cloth Hat, Cap, and Millinery Workers' International Union providing for the payment of unemployment benefits. This agreement covers workers in the hat and cap industry in New York City but has never included millinery workers. The system is supported entirely by the employers, who contribute 3 per cent of their union pay roll to the fund, the payments of all employers being deposited in a general fund. Benefits normally begin at the end of the second full week of unemployment and cover the second week. The benefit period is limited to seven weeks in any one year. The average number of firms covered by the agreement is 100, and the average number of members 1,200. During the period from July 1, 1931, to June 30, 1932, no benefits were paid and none had been paid up to October, 1932. The balance in the fund at that time was about \$8,000, and it was considered that there should be at least

\$25,000 in the reserve fund before it could start functioning again. A relief fund of about \$1,200 was raised last spring and other small benefits have been paid to unemployed workers from time to time. The condition of the industry, and consequently of the unemployment fund, is attributed not only to the general business depression but also to the present custom among young people of going without hats.

Cloth Hat and Cap Industry, Philadelphia, Pa.

Local Union No. 6 of the Cloth Hat, Cap, and Millinery Workers' International Union has had an agreement with manufacturers employing union members providing for the payment of unemployment benefits since 1924. The plan covers all members of the union employed by manufacturers who have subscribed to the agreement if they have been members of the union for at least one year and have been employed in the factory under agreement for at least six months. A member is not eligible, however, if he is more than four weeks in arrears in his union dues. The unemployment fund is maintained by payments by each manufacturer of 3 per cent of the pay roll of union members employed in his shop each week. It was provided that if the fund fell below \$1,000 the payment of benefits should be stopped until the fund reached \$2,000, but effective January 1, 1932, the rules were changed to provide that benefits stop when the fund falls below \$500 and are resumed when it again reaches \$1,000. In order to be eligible for benefits a member must have lost at least 20 hours of work in a week. Under the original plan the weekly benefits paid to men were \$10 and to women \$7, but in January, 1932, the benefits were reduced to \$7 and \$5, respectively. The number of firms contributing to the fund was 15 in 1927, but was dropped to 7 in the present year. The attempt is made to distribute work as evenly as possible among the firms. The regular hours of work are 40 per week, but there is much short time, and in September, 1932, only about 10 per cent of the members were working full time. The number of union members covered by the agreement had fallen from 200 in 1931 to 120 in 1932.

Straw Hat Industry, New York City

Two locals of the United Hatters of North America, i. e., Local No. 45 and Local No. 3, made up of straw and Panama hat operatives of New York City, have maintained joint agreements with their employers since 1924 and 1925, providing for the payment of unemployment benefits. The employers of the members of both locals maintained the funds through contributions of 3 per cent of their weekly pay rolls. In both plans there were provisions by which union members employed in shops not covered by the agreement could become members of the plan by the payment of fixed contributions. Benefits in both locals amounted to \$10 per week or, in the case of Local No. 45, to an amount sufficient to bring the wages up to that figure. In both locals two weeks' unemployment was necessary before a member was entitled to one week's benefit, and six months' membership in continuous good standing immediately prior to application for benefits was required in both instances.

In October, 1931, Local No. 45 was merged with Local No. 3. This was due in part to the unemployment situation, which had

caused many members to drop out, and also to the loss of funds through the closing of the Federation Bank in which the funds were deposited. Because of the loss of the money in the fund and the reduced pay rolls which failed to yield sufficient revenue for the fund, it has been impossible to pay benefits during the past year. The reopening of the bank, early in October, will probably enable the union to recover part of the money. In 1931 there were 11 firms and approximately 300 union members covered by the plan, all of whom received benefits during the first nine months, the payments amounting to about \$13,000. In spite of the difficulties which have been met in the operation of the plan, the union members are in favor of it and intend to continue its operation.

Full-Fashioned Hosiery Industry

An agreement between the Full-Fashioned Hosiery Manufacturers of America (Inc.) and the American Federation of Full-Fashioned Hosiery Workers, providing for the creation of an unemployment fund, was concluded in August, 1930. The agreement provided for the payment by employers of 1 per cent of the weekly wages of their employees into an unemployment fund, beginning August 1, 1930. It was provided that beginning September 1, 1931, the employers should deduct from the wages of employees subject to the agreement one-half of the sum paid by the employer for payment into the fund. This proportion of the amount was not finally decided upon at that time, however, as it was thought that at least 3 per cent of the employees' wages would be required, either divided equally between employer and employees, or 2 per cent paid by the employer and 1 per cent by the employees. During 1930 and the first part of 1931 difficulty was met in collecting contributions; and at the time the previous study was made, only about 25 per cent of the firms in the industry were contributing to the fund, with the result that the reserve fund was far below the estimated amount.

On September 21, 1931, a new national labor agreement was concluded which provided for drastic cuts in wage rates, ranging from 30 to 45 per cent. In view of this policy, the union negotiating committee felt that for some time to come the employees could not be expected to contribute to an unemployment fund from their reduced incomes. Accordingly, in the 1931 agreement the unemployment-fund provisions were omitted. The funds that were accumulated under the 1930 agreement for each plant were, in practically every instance, distributed to the employees of that plant, being divided on the basis of earnings. In two instances the accumulated funds are being used by the plant and the employees as a loan fund, although there is nothing permanent about this arrangement.

Lace-Curtain Industry, Kingston, N. Y.

The joint agreement between the United States Lace Curtain Mills, of Kingston, N. Y., and the Amalgamated Lace Operatives of America, Branch No. 8, was signed first in 1923. The company in normal times employs from 100 to 110 persons, but in April, 1931, about 80 were employed. The union membership covered by this plan was 16 at that time and has remained at that figure up to the present time. The union is made up of weavers and the plan has enabled

the mills to maintain a labor supply of skilled workers. The fund is financed by contributions of 50 cents by every member whose earnings for a week are \$18 or more, and by a contribution by the company equal to the amount paid by the employees. The plan provides for the payment of an unemployment benefit which is the difference between earnings and the minimum wage guaranteed. The minimum wage has varied from time to time according to the condition of the fund and of employment conditions. The minimum guaranteed was originally fixed at \$15 per week, but since January, 1931, it has ranged from \$8.10 to \$15, the latter figure being the rate paid in August, 1932. Benefits are not paid for complete shutdown of the factory but are paid when a member loses so much time that his earnings are reduced to less than the guaranteed minimum. During 1931 benefits were paid to 16 members, amounting to \$670.74, and up to September in 1932, \$630.77 was paid to 14 members. Loans totaling \$1,100 had been made to the fund; and although there was a little more than \$200 in the fund, in September, 1932, there was an actual deficit of \$892. All members at that time were working short time, the average hours for the entire plant being 37. Both the company and the members of the union are entirely satisfied with the operation of the plan and there is no intention of changing it.

Lace Industry, Philadelphia, Pa.

Two plans are established by joint agreement between the lace companies and the employees in the lace industry in Philadelphia. The first is maintained between the Bromley Manufacturing Co. and its lace weavers who are members of Branch No. 1 of the Amalgamated Lace Operatives, and the other between the Bromley Lace Co. and its Levers machine weavers who are members of Branch No. 18 of the union.

Lace-curtain weavers and the Bromley Manufacturing Co.—The agreement provides for the maintenance of an unemployment fund supported jointly by the company and members of Branch No. 1. Under the plan a minimum wage is established for eligible members, all the members of Branch No. 1 at this mill being compulsorily covered by the plan. The fund was originally financed by contributions of 50 cents each week by members earning \$18 or over, matched by an equal contribution by the company. At the end of 1929, however, owing to bad business conditions, the company suspended further payments to the fund. At the same time the shop members suspended payments for the first six months of 1930, so that nothing was being paid into the fund during that time. Payments into the fund were resumed by the union members in July, 1930, and at the beginning of 1931 a change was made in the system of contributions to the unemployment-benefit fund, the contributions being placed on a sliding-scale basis. The present scale provides for no payment by workers receiving less than \$15 per week, contributions of 50 cents for earnings from \$15 to \$16, and 5 cents additional for each additional \$2 earned. Although the agreement has never been dissolved, the company has not resumed its contributions. After the company stopped its contributions benefits were paid from the joint account as long as it lasted, while subsequent contributions from members were deposited in a separate fund. The original fund was exhausted

in November, 1931, and the new fund, made up entirely of the shop contributions, is administered by two members of the union, the company cooperating only to the extent of compiling the out-of-work roll. Until March, 1932, benefits were \$15 a week or an amount sufficient to bring the week's earnings up to that figure. Later the benefit was reduced to \$10 and again to \$8, at which figure the benefit now stands. There were 68 members in the union during 1931 and 65 in 1932. Sixty-five persons received benefits in 1931 amounting to \$8,599.59 and 60 received benefits up to September, 1932, the benefits amounting to \$3,025. The balance in the fund at that time was \$550. The union has had a difficult time to keep the plan in existence but intends to continue it. This year it was necessary to borrow \$2,000 from the lace operatives and \$259 from the company relief fund. In September the members were working regularly, though on short time, and it was the hope that the fund could again be built up.

Levers machine operators and Bromley Lace Co.—The Levers section unemployment fund was started in 1926. The plan, like that of Branch No. 1, provides for an unemployment benefit guaranteeing a minimum wage. Although the agreement provides for equal contributions by the company and the union employees, the company suspended its contributions at the end of 1929. The dues are fixed at 50 cents per member for those earning \$15 and under \$20 per week and at \$1 for those earning \$20 and over on January 1, 1932. There were 41 members of the union in the spring of 1931, of whom 26 were eligible to receive benefits, and in July, 1932, there were 23 union members, 20 of whom were eligible for benefits. Under the original plan benefits of \$15 per week for an amount sufficient to bring each member's wage for the week up to that amount was paid. In August, 1931, the fund became so depleted that it was impossible to pay that amount, but a loan from the firm allowed the payment of \$6 per week to unemployed members for the rest of the year. In the first two months of 1932 the business of the firm, and therefore the employees' earnings, were somewhat better, but in April it was necessary to secure another loan from the company, which enabled the members to receive \$6 per week up to the second week in July. In 1931 and the first half of 1932 the members paid \$932.50 in dues and the loans to the fund by the firm amounted to \$1,766.58. During the 18-month period \$4,319.76 was paid in benefits to the members of the union.

Lace Industry, Scranton, Pa.

In 1923 the Amalgamated Lace Operatives of America, Branch No. 3, entered into a joint agreement with the Scranton Lace Co. to provide unemployment benefits for the members of the union. The plan provided for an unemployment-benefit payment sufficient to bring the earnings of a person eligible to benefits up to the guaranteed minimum weekly wage. Participation is compulsory for members of the union employed by the Scranton Lace Co. Under the original plan funds for its maintenance were raised by assessing every union weaver employed by the company who earned \$15 or more in a week 50 cents for that week, an equal amount being contributed by the company. On May 10, 1932, however, an emergency measure was adopted by the members and accepted by the Scranton Lace Co.

providing for an extra assessment of approximately 10 per cent of their weekly wages to the fund. The actual assessment amounts to \$3 for earnings of \$30 to \$34.99, \$3.50 from \$35 to \$39.99, and \$4 from \$40 to \$44.99. No member is liable for the extra assessment unless he has earned a minimum wage of \$30 in any given week. The assessment is to remain in force until the fund reaches the amount of \$10,000. Benefits are paid for time lost waiting for orders and waiting for repair of machines. A minimum wage of \$15 is guaranteed by the agreement; and if a member does not earn that amount in a week, the difference between \$15 and the amount earned is made up from the unemployment fund. The fund is administered by a board of managers composed of two union and two company representatives.

The number of members covered by the plan in 1931 and in the first half of 1932 was 85. In 1931, 961 claims were paid, the total benefits amounting to \$12,088.86. As all of the members received benefits the average per member amounted to \$142.22. From January 1 to July 1, 1932, 587 claims amounting to \$8,415.48 were paid. The average benefit per member in the six months' period was \$99. The balance in the fund on July 1 was \$1,867.11. The members have found the fund of great assistance and do not want it discontinued, although at the time of the report it was very much depleted. Prior to the present depression the fund had always been adequate to meet the demands made upon it for benefit payment and to maintain an adequate balance.

Lace Industry, Wilkes-Barre, Pa.

This unemployment-benefit plan is no longer operating as a joint agreement but has been continued as a trade-union plan. The plan was adopted in 1924, superseding a trade-union benefit plan which had been maintained by the union since 1910. The agreement between the company and the union provided for six months' notice of intention to withdraw from the agreement, and this notice was accordingly given by the company in the fall of 1931, the agreement being finally dissolved May 5, 1932. The balance in the fund at that time, amounting to \$18,252.58, was equally divided between the company and the union, the company having contributed an amount equal to that contributed by the union members.

Leather Goods Unemployment Fund

A joint agreement signed between the International Pocketbook Workers' Union and the Industrial Council of Leather Goods Manufacturers June 13, 1931, contained an unemployment-insurance clause. Union members on the pay rolls of employers who were parties to the agreement were automatically covered by the insurance provisions. The unemployment-benefit plan is financed by contributions equal to 5 per cent of the pay roll, 2½ per cent of the weekly earnings of both week and piece workers being deducted by the employer and paid into the unemployment fund together with an equal contribution by the firm. No fixed benefits were established at first, but it was provided that benefits were to be paid in accordance with the ruling of the board of trustees, depending on the number of unemployed and the funds on hand. Later, however, the board

decided that every unemployed worker who was registered with the International Pocketbook Workers' Union after being unemployed for eight weeks or over should be entitled to register with the unemployment insurance bureau and participate in the benefits. It was also decided that the benefits would be paid in accordance with the number unemployed and the funds on hand, the payments up to now being \$10 per week for married persons and \$6 for single persons. The administration of the fund is in the hands of a board of trustees composed of three representatives of the union, three of the employers, and an administrator, chosen at the time of the signing of the agreement, acting as chairman of the board and manager and counsel of the fund.

As the unemployment fund was started during the severest part of the depression, not only was there no time to build up a reserve but it was necessary to operate the fund in such a way as to render as much relief as possible. The contributions to the fund from employers and employees during the first year of the agreement amounted to approximately \$136,000. Of this amount, \$104,122 was paid in benefits, while administrative and other incidental expenses amounted to a little more than \$12,000, leaving a balance in the fund of \$18,716. There were 11 benefit payments made during the year, the maximum benefit being \$110.

With the renewal of the agreement in June, a new plan of operation was being considered, the board of trustees having under consideration restricting eligibility to benefits to those members who have contributed to the fund, the benefits to be paid on a pro rata basis, that is, to be based on the number of months for which contributions had been paid.

United Wall Paper Crafts of North America

A guaranteed-employment plan was adopted in the wall-paper industry through an agreement between the union and the employers in 1894. The employment guaranty applied to machine printers, color mixers, and print cutters. Prior to 1929 the agreement provided for 50 weeks of work—45 weeks of work at full pay and 5 weeks on vacation at half pay—provided the factory failed to operate. In 1929 the guaranty is reported to have been reduced to 40 weeks at full pay. Since that time, however, no agreement providing for guaranteed employment has been in effect. In 1932 the members of the union had been forced to accept a 20 per cent reduction in wages and there had been much unemployment, more than half of the members being entirely unemployed in September.

Labor Productivity and Employment in the Tire Industry

THE average pneumatic tire produced in 1931 is very different from the average tire produced in 1926, and the latter in turn differed greatly from the tires produced in 1922 and in 1914. Year after year changes have been made in the style, shape, size, and weight of tires and in the quantity and proportion of raw materials used in their production. No standard of measurement is available by which the output of any one plant may be expressed in terms of output of another plant or the total output of any one year expressed in terms of the total output of another year. For this reason the data on labor productivity presented in this article do not measure precisely the actual changes in the total output or in the man-hour output in manufacturing pneumatic tires. The statistics here presented are based (1) on the total number of tires produced and (2) on the combined total weight of the rubber, chemical ingredients, and fabric used in the production of tires; these bases offer the closest approximation available for the measuring of changes in labor productivity in the manufacture of pneumatic tires.

In 1931 the man-hour output in the pneumatic tire industry, measured by the weight of rubber compounded with fabric used in the production of tires, was 34.52 per cent above 1929 and 86.08 per cent above that of 1926. This remarkable increase in the productivity of labor enabled 6 representative tire-manufacturing plants studied by the Bureau of Labor Statistics, to produce 29.34 per cent more than in 1926, with a reduction of 30.49 per cent in the direct productive labor time. Compared with 1922, the 6 plants increased their output per man per hour 171.89 per cent. This enabled them to increase their total production 119.72 per cent above that of 1922, and at the same time reduce the direct productive man-hour outlays 19.17 per cent from the 1922 level.

Since 1914 the man-hour output of the six tire-manufacturing plants has risen 581.05 per cent. The rise was steady but comparatively slow until 1929, when the index of man-hour output, based on 1914 as 100, stood at 506.25. In 1930 it jumped to 581.03, which is an increase of nearly 75 points over 1929, and in 1931 it made even a larger jump to 681.05, registering an increase of 100 points over 1930, the largest increase of any one year in the history of the 6 plants.

These are some of the facts disclosed by the Bureau of Labor Statistics in its study of labor productivity and labor employment in the tire industry. The survey, now completed, covers six representative tire manufacturing plants, which in 1931 produced 59.80 per cent of the total tire output in the United States. The present article contains a brief summary of that portion of the survey dealing with productivity of labor, technological changes, and their effect on the employment situation in the tire industry. A detailed report outlining the history of tire manufacturing from 1922 to 1931, and showing the changes in the method of production, the statistics of total and man-hour output of the six representative plants, data on employment and average earnings of the wage workers, will be published later as a bulletin of the bureau.

Production of and Demand for Tires

THE manufacture of tires is a comparatively new industry. The history of tire making, like that of its parent, the automobile industry, has been predominately a postwar development. In 1914 only approximately 9,000,000 pneumatic tires were produced in this country. In 1920, 33,000,000 tires were produced, and in 1928, the year of the largest tire output, the total production was approximately 78,000,000 tires. The 1931 output was 48,500,000 tires.

There are two principal sources of demand for tires in the United States—for new equipment in the automobile industry and for renewals of tires on older cars. In addition there is also a small demand for tires for export purposes. Table 1 gives the total number of tires produced from 1913 to 1931, also the total number of tires used as new equipment and the number sold for renewal purposes from 1923 to 1931. The figures indicate that the principal source of demand for tires comes from renewal sales. The same table also contains the number of new automobiles produced and the total number of cars registered from 1913 to 1931. Division of the total number of tires used in renewal sales by the total number of registered cars gives the average number of renewal tires purchased annually for every car registered during that year.

TABLE 1.—PRODUCTION AND SALES OF TIRES, PRODUCTION AND REGISTRATION OF AUTOMOBILES, AND NUMBER OF RENEWAL TIRES PER CAR FOR SPECIFIED YEARS, 1913 TO 1931

Year	Number of tires				Number of automobiles			Renewal tires sold per registered car	
	Produced	For new equipment	For renewals	Total sold	Produced	Registered	Total requiring tires	Number	Index (1926=100)
1913.....	6,600,000		4,675,000		485,000	1,258,000	1,743,000	3.72	204.40
1914.....	9,000,000		6,725,000		569,000	1,711,000	2,280,000	3.93	215.94
1919.....	32,835,000		25,100,000		1,934,000	7,565,000	9,499,000	3.31	181.87
1920.....	33,000,000		24,000,000		2,227,000	9,232,000	11,459,000	2.60	142.86
1921.....	27,298,000		20,500,000		1,682,000	10,465,000	12,147,000	1.96	107.69
1922.....	40,930,000		30,000,000		2,646,000	12,240,000	14,886,000	2.45	134.62
1923.....	45,241,000	15,977,000	29,900,000	45,877,000	4,180,000	15,092,000	19,272,000	1.98	108.79
1924.....	51,633,000	13,535,000	34,200,000	47,735,000	3,758,000	17,595,000	21,353,000	1.94	106.59
1925.....	60,855,000	17,400,000	37,300,000	51,700,000	4,428,000	19,954,000	24,382,000	1.87	102.75
1926.....	60,725,000	15,985,000	40,100,000	56,085,000	4,506,000	22,001,000	26,507,000	1.82	100.00
1927.....	64,537,000	13,025,000	47,000,000	60,025,000	3,580,000	23,133,000	26,713,000	2.03	115.38
1928.....	77,940,000	17,700,000	49,500,000	67,200,000	4,601,000	24,493,000	29,094,000	2.02	110.99
1929.....	68,724,000	20,957,000	45,847,000	66,804,000	5,354,000	26,501,000	31,855,000	1.73	95.05
1930.....	50,966,000	13,631,000	37,965,000	51,596,000	3,509,000	26,524,000	30,033,000	1.43	78.57
1931.....	48,497,000	9,637,000	37,310,000	43,947,000	2,460,000	25,940,000	28,400,000	1.43	78.57

From 1923 through 1926 the average number of renewal tires purchased per registered car gradually diminished. During 1927 and 1928 the average rose considerably, to a figure above that of 1923, the cause being the rapid introduction in 1925 and 1926 of the balloon tire, the first manufactures of which apparently did not last as long as the average high-pressure tires of the previous years. Since 1928, however, the average number of renewal tires purchased per registered car has been diminishing even more rapidly, and in 1931 amounted to only 1.43 tires, as compared with the 1927 average of 2.03 tires and the 1923 average of 1.98 tires.

The principal cause of this reduction in the number of renewal tires per registered car has unquestionably been the better quality and longer life of the average tire produced. In 1914 the average guaranteed mileage per tire did not exceed 3,500 miles. In 1922 the average life of a cord tire was more than 8,000 miles, while in 1930 and 1931 the life of an average tire was conservatively estimated at between 15,000 and 20,000 miles. Constant improvement in the quality of the product may result eventually in the manufacture of tires that will last as long as the average automobile. In that case the largest source of the present demand for tires will be automatically eliminated and tire manufacturing will be reduced to a comparatively minor part of the automobile industry.

Growth of Tire Industry

THE development and growth of the automobile-tire industry during the last decade is presented in Table 2, compiled from Census reports and covering the period from 1921 to 1931.

TABLE 2.—STATISTICS OF PRODUCTION FOR AUTOMOBILE-TIRE INDUSTRY, FOR SPECIFIED YEARS, 1921 TO 1931

Item	1921	1923	1925	1927	1929	1931
Number of establishments.....	178	160	126	109	91	54
Number of wage earners.....	55,496	73,963	81,640	78,256	83,263	48,341
Average per establishment.....	312	462	648	718	915	895
Amount paid in wages.....	\$75,054,000	\$108,623,000	\$120,614,000	\$120,064,000	\$127,082,000	\$62,385,000
Average per worker.....	\$1,352	\$1,469	\$1,477	\$1,542	\$1,526	\$1,290
Number of tires produced:						
Casings.....	27,298,000	45,425,000	58,784,000	63,550,000	69,765,000	48,989,000
Solid tires.....	401,000	944,000	1,035,000	813,000	424,000	103,000
Average per establishment.....	155,600	289,800	474,800	590,500	771,300	943,000
Average per worker.....	499.1	626.9	732.7	822.5	843.0	1,015.5
Number of inner tubes produced.....	32,082,000	57,229,000	77,388,000	70,855,000	74,043,000	47,728,000
Value of tires and tubes.....	\$496,123,000	\$644,194,000	\$925,002,000	\$869,688,000	\$676,364,000	\$352,924,000
Average per article.....	\$17.91	\$13.89	\$15.46	\$13.51	\$9.63	\$7.19
Value added by manufacture.....	\$204,569,000	\$279,029,000	\$365,062,000	\$370,467,000	\$340,570,000	\$221,036,000
Average per worker.....	\$3,686	\$3,776	\$4,472	\$4,734	\$4,090	\$4,574
Per cent earnings are of value added per worker.....	36.68	38.90	33.03	32.58	37.31	28.20

In 1921, 178 establishments employing an average of 55,496 wage earners produced 27,298,000 pneumatic and 401,000 solid tires. In 1931, 54 establishments employing on the average 48,341 wage earners produced 48,989,000 pneumatic and 103,000 solid tires. During this period, therefore, the total number of establishments fell from 178 to 54. The total number of wage earners, however, rose gradually from 55,496 in 1921 to a maximum of 83,263 in 1929 and then abruptly declined to an average of 48,341 in 1931. The rapid decrease in the number of establishments accompanied by the substantial increase in the average number of wage earners employed, clearly indicates the extent of concentration which took place in the tire industry during the short period between 1921 and 1929. The concentration is still further emphasized by the rapidly growing output per establishment. In 1921 the average yearly production was 155,600 pneumatic and solid tires per establishment; in 1927 it was 590,500 tires; and in 1931, 943,000 tires, or more than six times as much as in 1921.

Side by side with this large growth of output per establishment there was also registered a very large annual increase in the output per wage earner employed in the industry. In 1921 the average annual output per wage earner was 499.1 tires, in 1927 it was 822.5 tires, and in 1931 it was 1,015.5 tires, or more than twice that of 1921. This increase could not have been accomplished without a correspondingly large increase in man-hour output. A brief analysis of the man-hour productivity in the tire industry from 1914 to 1927 was published in the March, 1930, issue of the Monthly Labor Review, in an article entitled, "Productivity of Labor in 11 Manufacturing Industries." Table 3, taken from that article, gives the index numbers of man-hours, of total production, and of output per man per hour, on the 1914 base. These figures were computed partly from data taken from census reports and partly, especially in the case of man-hours, from the employment data of the Bureau of Labor Statistics. The 1927 index of man-hours was 197, the production index was 773, and the man-hour productivity index was 392. According to these figures the output per man per hour has nearly quadrupled from 1914 to 1927.

TABLE 3.—INDEX NUMBERS OF MAN-HOURS, PRODUCTION, AND MAN-HOUR PRODUCTIVITY IN THE RUBBER-TIRE INDUSTRY, FOR SPECIFIED YEARS, 1914 TO 1927

[1914=100]

Year	Man-hours	Production	Man-hour productivity	Year	Man-hours	Production	Man-hour productivity
1914.....	100	100	100	1924.....	180	608	338
1919.....	262	391	149	1925.....	207	728	352
1921.....	154	305	198	1926.....	202	739	366
1923.....	187	521	279	1927.....	197	773	392

Object and Scope of Present Survey and Methods Used

SINCE 1927 the increase in the labor productivity has been even more rapid than in the previous years. This is especially true of 1930 and 1931, as shown by the fact that in 1931 the annual output per wage earner was 1,015.5 tires, as compared with 843 tires per wage earner in 1929 and 822.5 tires in 1927. This uninterrupted growth in the man-hour output in the tire industry caused the Bureau of Labor Statistics to undertake the present survey with the object, first, of measuring the actual extent of the increase in the labor productivity in the tire industry; second, of determining if possible the principal causes responsible for the increase in man-hour output; and finally, of estimating approximately the effects on labor employment in the industry produced by the increase in labor productivity. The sample covered by the survey consists of six major tire-manufacturing plants which were studied for a period from 1922 to 1931. In 1922 these six plants combined produced over 18,000,000 pneumatic tires, or 44.76 per cent of the tires produced by the entire industry. In 1931 the six plants produced slightly over 29,000,000 tires, or 59.80 per cent of the 48,500,000 tires produced in the country. The percentage the sample forms of the total industry thus ranges from a low of 44.26 in 1925 to a high of 59.80 in 1931; this further emphasizes the degree of concentration which has taken place in the industry during the last decade and especially during the last five or six years.

TABLE 4.—TIRE PRODUCTION OF SIX REPRESENTATIVE PLANTS STUDIED, AS COMPARED WITH TOTAL PRODUCTION OF TIRE INDUSTRY, 1922 TO 1931

Year	Production of pneumatic tires			Index numbers (1926= 100)		Per cent index of sample forms of in- dex of total production
	Entire in- dustry ¹	6 plants studied		Total pro- duc- tion	Produc- tion of 6 plants studied	
		Amount	Per cent of total			
1922.....	40, 930, 000	18, 320, 000	44. 76	67. 40	65. 69	97. 47
1923.....	45, 241, 000	20, 641, 000	45. 63	74. 50	74. 02	99. 37
1924.....	51, 633, 000	23, 182, 000	44. 90	85. 02	83. 12	97. 76
1925.....	60, 855, 000	26, 936, 000	44. 26	100. 21	96. 59	96. 39
1926.....	60, 725, 000	27, 887, 000	45. 92	100. 00	100. 00	100. 00
1927.....	64, 537, 000	31, 311, 000	48. 52	106. 28	112. 28	105. 66
1928.....	77, 940, 000	37, 488, 000	48. 10	128. 35	134. 43	104. 75
1929.....	68, 724, 000	37, 783, 000	54. 98	113. 18	135. 49	119. 73
1930.....	50, 966, 000	29, 865, 000	58. 60	83. 93	107. 09	127. 61
1931.....	48, 497, 000	29, 001, 000	59. 80	79. 86	104. 00	130. 23

¹ Based on statistics of Rubber Association of America, published monthly in India Rubber World.

Measuring Production

Both the United States Census Bureau and the tire trade use the number of tires, irrespective of size, as the unit for measuring output. The variation in the sizes of tires produced and in the number of plies used per tire, however, is so large as to render questionable the desirability of the use of number of tires alone as a measure of output. The variation has been especially marked since 1926, when large trucks and busses began to use pneumatic tires. In all six plants covered by the survey the average weight of rubber compounded with fabric used in the production of pneumatic tires ranged from a low of 15.44 pounds per tire in 1924 to a high of 22.93 pounds per tire in 1930. In the individual plants the variation was even greater, with a maximum range in one plant specializing in the larger sizes of tires from 17.32 pounds per tire in 1922 to 35.62 pounds per tire in 1929, or more than 100 per cent. The larger-size tires require not only more labor time on account of the extra amount of rubber and fabric handled, but also the use of a different method of building the body of the tire. In fact, the new process of building the tire on a flat or shoulder drum can be applied to tires only up to a certain size, beyond which the tire must be built by the old "core" process.

It is apparent, then, that for an exact measurement of output some other criterion must be found. As a matter of fact, many individual plants prefer and use the weight of the rubber compounded with fabric as the unit for measuring their total production and particularly their man-hour output. Unfortunately this was not true of all the plants studied, and the Bureau of Labor Statistics therefore was compelled to use both units—number of tires produced and weight of rubber compounded with fabric.

Man-Hours Defined

The term "man-hours," as used in this survey, covers direct productive labor only, that is, the labor directly and intimately involved in the process of production. Warehousemen, laboratory workers, foremen, checkers, timekeepers, etc., whose services are not directly

involved in the process of tire making, are therefore not included in the figures for the man-hours used in this survey. It was not possible, however, for the bureau to obtain strictly comparable figures on man-hours for all the six plants. While most of the plants had records showing separately the man-hours spent on direct productive labor, in two plants no complete segregation was made of such indirect labor as that of machinists, electricians, oilers, checkers, etc., whose labor time had therefore to be included in the man-hours for those two plants. Again, since not all of the plants could furnish separate man-hour data for the various departments of the plant, in some cases it was necessary to obtain these data from the pay rolls of the departments, on the basis of the average hourly earnings of the workers in each. During the period covered by the bureau's survey (i. e., 1922 to 1931) so many changes have taken place in the plants as a whole, and especially in the make-up of the individual departments, as to render impossible any attempt to trace by departments the history of the changes in the plants. Instead, the entire process of tire manufacturing has been divided into three major parts, namely: (a) Preparation of the crude rubber, which includes washing, milling, compounding, and calendering the rubber and the fabric; (b) preparation of all the constituents of a tire (i. e., stock preparation) and the actual process of tire building ("carcass" building); (c) vulcanization or curing of the tires and the finishing and final inspection of tires.

In preparing the data on man-hours for the individual plants it thus became necessary not only to reclassify the data for various plant departments so as to fit them into one of the major divisions mentioned above, but at times even to break up the total labor time of any one department, assigning one part of it to one division and another to another division. For each plant the primary consideration was to keep the three major group divisions uniform for the entire period covered by the survey. On the other hand, while the figures of any one plant have thus been made comparable from year to year for the entire period, those of the different plants are not exactly comparable with each other. This, of course, precludes the possibility of comparing the productivity of one plant with that of another, especially since at a given time the industrial status of the individual plants has not been the same.

Productivity of Labor in the Tire Industry

TABLE 5 presents a composite production history of the six manufacturing plants studied. The first half of the table gives the data for the actual production from 1922 to 1931, and the second half gives index numbers of production, with the year 1926 as a base.

In the table production is expressed in terms both of number of tires produced and of the weight of rubber compounded with fabric used in the production of these tires. The man-hours shown are those worked in direct productive labor.

In the second half of the table, showing index numbers, the year 1926 was selected as the base because of its relation to three important events in the tire industry:

(1) The change in the style of pneumatic tires produced. Balloon tires, although invented early in the twentieth century, did not make

their appearance as standard automobile equipment until late in 1924. In 1925 high-pressure tires still predominated in production. By 1926 balloon tires represented nearly 50 per cent of the total tire production and continued to gain very rapidly, so that by 1931 they constituted 86 per cent of the total production. The history of tire manufacturing from 1926 to the present day, therefore, represents the history of the balloon tire, while from 1922 to 1926 the history was that primarily of the cord high-pressure tire.

(2) The change in the process of building the body, or "carcass," of the tire. As early as 1919 some plants began to use the flat-drum process of manufacturing pneumatic tires, but it was not until 1925 that any large percentage of the tire manufacturers definitely adopted this process for the typical automobile tires. Since then the development of the process has been very rapid, and by 1931 only the very large bus and truck tires were built by the old hand or "core" process. All other pneumatic tires are now built partly by the flat and partly by the shoulder drum process. Here again 1926 may be regarded as the dividing line between the old and the new processes, the core process predominating prior to that year and the flat-drum process after that year.

(3) The two years 1925 and, particularly, 1926 may be regarded as periods of more or less stable, normal production in the country as a whole, as well as in the automobile and tire industries.

TABLE 5.—TOTAL AND MAN-HOUR PRODUCTION IN SIX TIRE PLANTS STUDIED, AND INDEX NUMBERS THEREOF, BY YEARS, 1922 TO 1931

Year	Total output		Man-hours worked	Output per man-hour		Average weight per tire	Index numbers (1926=100)					
	Number of tires	Pounds		Tires	Pounds		Total output		Man-hours	Output per man-hour		
							Tires	Pounds		Tires	Pounds	
						Lbs.						
1922----	18,320,000	295,222,000	26,165,000	0.70	11.28	16.12	65.69	58.57	85.99	76.34	68.46	
1923----	20,631,000	324,544,000	26,431,000	.78	12.28	15.73	73.98	64.71	86.87	85.17	74.50	
1924----	23,182,000	357,863,000	28,161,000	.82	12.71	15.44	83.13	71.36	92.55	89.75	77.10	
1925----	26,936,000	466,238,000	33,860,000	.80	13.77	17.31	96.59	92.97	111.28	86.80	83.55	
1926----	27,887,000	501,513,000	30,427,000	.92	16.48	17.98	100.00	100.00	100.00	100.00	100.00	
1927----	31,311,000	599,642,000	31,867,000	.98	18.82	19.15	112.28	119.57	104.73	107.20	114.17	
1928----	37,488,000	752,333,000	35,885,000	1.05	20.97	20.07	134.43	150.01	117.94	113.96	127.20	
1929----	37,783,000	801,725,000	35,167,000	1.07	22.80	21.22	135.49	159.86	115.58	117.12	138.32	
1930----	29,865,000	684,645,000	26,166,000	1.14	26.17	22.93	107.09	136.52	86.00	124.43	158.75	
1931----	29,001,000	648,648,000	21,150,000	1.37	30.67	22.37	103.99	129.34	69.51	149.51	186.08	

In 1922 the six manufacturing plants covered by Table 5 produced 18,320,000 tires whose combined weight (rubber compounded with fabric) was 295,222,000 pounds. From that year until 1929 there was a steady increase in the number of tires produced and a still larger increase in the total weight of the tires, due to the increase in the average size of tires produced. In 1929 these plants produced 37,783,000 tires, the largest number of tires produced by them in any one year. There was a large decline in the number of tires produced in 1930, but in 1931 the total number of tires produced by the six plants was only slightly smaller than their 1930 output. Expressed in index numbers, with 1926 as a base, the total output, measured by the number of tires produced, rose from 65.69 in 1922

to a maximum of 135.49 in 1929, then declined to 107.09 in 1930 and 103.99 in 1931. Notwithstanding the decline in 1931, the index for that year is more than one and a half times as great as that of 1922. Measured by the weight of output, the index rose from 58.57 in 1922 to a maximum of 159.86 in 1929 and then declined to 136.52 in 1930 and 129.34 in 1931, which is more than twice the index for 1922.

In 1922 the total direct productive labor time required for the manufacture of pneumatic tires in these six plants amounted to 26,165,000 man-hours. The peak in direct productive labor time expended was reached in 1928, when 35,885,000 man-hours were required. In 1929 the number of man-hours worked declined, in spite of the small increase both in total number of tires produced and in weight of product. There was a very large decline in the number of man-hours worked in 1930 and another substantial decline in 1931, notwithstanding the fact that in 1931 the total output of the six plants (measured either by number of tires or weight of product) registered only a slight decrease as compared with 1930. Expressed in index numbers on the 1926 base, the productive labor time expended rose from 85.99 in 1922 to 111.28 in 1925. In 1926 it fell to 100 and then rose again to 117.94 in 1928, which is the highest index of man-hours for the entire period. It declined to 115.58 in 1929 and then suffered a very large decline to 86 in 1930, and still another large decline in 1931, when the index of man-hours stood at 69.51, the lowest for the entire period covered by the survey.

The output per man per hour, measured in terms of tires produced, rose from 0.70 tire in 1922 to 0.82 tire in 1924. It declined to 0.80 tire in 1925, a circumstance which can be attributed to the experimentation with balloon tires, which had made their first appearance late in 1924. Beginning with 1926, the man-hour output showed a continuous rise, somewhat slow until 1929, but accelerating decidedly in 1930 and particularly in 1931. The increase is even more noticeable if the man-hour output is measured in terms of weight. In 1922 the average output per man per hour was 11.28 pounds. In 1925, although the number of tires produced per man-hour declined slightly, there was a considerable increase in the number of pounds produced per man-hour. This, of course, was due to the fact that the balloon tire required a larger amount of rubber and fabric than the average high-pressure tire. From 1926 through 1931 the output in pounds per man-hour showed a trend similar to that of the man-hour output of tires, but the increase was more rapid. Thus, from 1926 to 1927 the index of man-hour output of tires rose 7.20 points, while that of man-hour output in pounds rose 14.17 points. From 1930 to 1931 a very considerable rise occurred in man-hour output, the index of tire output registering a gain of 25.08 points and that of pounds output a gain of 27.33 points. During the period from 1922 to 1931 the man-hour output of tires has nearly doubled and that of pounds nearly tripled.

The present survey included a number of years already covered in a previous analysis by the Bureau of Labor Statistics. In the earlier study 1914 was taken as the base year. Table 6 shows index numbers of the total and man-hour output of the six manufacturing plants on the 1914 base.

TABLE 6.—INDEX NUMBERS OF TOTAL AND MAN-HOUR OUTPUT AND OF LABOR TIME REQUIRED IN SIX TIRE PLANTS, 1914 TO 1931

[1914=100]

Year	Total output		Man-hours worked	Output per man-hour	
	Tires	Pounds		Tires	Pounds
1914.....	100.00	100.00	100.00	100.00	100.00
1922.....	485.45	432.83	173.70	279.40	250.56
1923.....	546.71	478.21	175.48	311.72	272.67
1924.....	614.33	527.35	186.95	328.49	282.19
1925.....	713.80	687.05	224.79	317.69	305.79
1926.....	739.00	739.00	202.00	366.00	366.00
1927.....	829.75	883.62	211.55	392.35	417.86
1928.....	993.44	1,108.57	238.24	417.09	465.55
1929.....	1,001.27	1,181.37	233.47	428.66	506.25
1930.....	791.40	1,008.88	173.72	455.41	581.03
1931.....	768.49	955.82	140.41	547.21	681.05

The index of the total tire output of the six plants covered by the present survey and measured by the number of tires produced rose from 100 in 1914 to 1,001.27 in 1929, then receded to 791.40 in 1930 and to 768.49 in 1931. The index of the weight output rose from 100 in 1914 to a maximum of 1,181.37 in 1929 or nearly twelve times the 1914 figure. It then receded to 1,008.88 in 1930 and to 955.82 in 1931, which is still nearly ten times as much as in 1914. That the total direct productive man-hours worked did not keep pace with the total output may be seen from the fact that the peak index number for man-hours (238.24 in 1928) was not quite two and a half times the 1914 figure. Since 1928 the labor time required has rapidly diminished, reaching in 1931 an index of 140.41, only 40 per cent over 1914, whereas in the same year the tire-production index stood at 668 per cent and the weight-production index at 856 per cent above 1914.

This contrast in pace between total production and total man-hours was due chiefly to the tremendous increase in the output per man-hour which took place during the period from 1914 to 1931. The tire output per man-hour rose from an index of 100 in 1914 to 279.40 in 1922 and to 547.21 in 1931. The weight output per man-hour rose from an index of 100 in 1914 to 250.56 in 1922 and to 506.25 in 1929. Between 1929 and 1930 an increase of nearly 75 points occurred (the index rising to 581.03); and between 1930 and 1931, an increase of more than 100 points (rising to 681.05), the largest yearly increase shown in the period covered by the survey. The upward trend of man-hour output has thus continued from year to year quite irrespective of the trend in the total production or of the total man-hours worked. Man-hour productivity, which rose while total output and total man-hours worked were increasing, continued to do so at an even faster pace after total output and labor time began to fall, thus indicating a greater reduction in labor time requirements per unit of output during periods of reduced than in periods of increased production.

Labor Displacement and Unemployment in the Tire Industry

EVERY increase in the output per man per hour in a plant indicates a corresponding reduction in the amount of labor time required for a

given product. The labor reduction is measured by the difference in the labor time required to produce a unit of output before and after the change in the output per man per hour took place. The column of indexes for the man-hour output presented in Table 5 may, therefore, be considered as representing the trend of reduction in labor requirements in the six representative plants between 1922 and 1931, inclusive. In 1931 the index for the man-hour output measured in pounds of rubber compounded with fabric used in the production of tires was 186.08, which may be interpreted to mean that with the 1926 output per man-hour the total labor employment in 1931 would have been nearly twice the actual employment. For similar reasons the 1931 output with a 1914 output per man-hour would have required nearly seven times the amount of labor that was actually employed in 1931.

Translated into terms of employment, reduction in labor requirements per unit of output may be regarded as a decrease in the chances for labor employment in the industry. That there was no actual unemployment in the tire industry until 1930, notwithstanding the large increases in the man-hour output, was due solely to the fact that the period from 1914 through 1929 represented an era of tremendous expansion in the automobile industry, which naturally reflected itself in the production of pneumatic tires. In 1914 there were only 2,280,000 newly made and registered automobiles requiring tires. In 1929 this figure grew to 31,855,000 newly built and registered automobiles. In the tire industry the total number of tires produced rose from 9,000,000 to nearly 78,000,000. This tremendous upswing in the total tire production not only was sufficient to take up the surplus of labor produced by the constant increase in the man-hour output but with one exception necessitated an annual increase in the total number of wage earners employed. As already shown in Table 2, based on census reports, there were on the average 55,496 wage earners employed in 1921 for the production of tires and inner tubes. By 1929 the average total number of wage earners employed had risen to 83,263. Such a state of affairs, combining increased employment with large increases in man-hour output, could not continue unless demand increased at the same rate. This had already become apparent in 1927. From 1925 to 1927 there was an increase in annual production amounting to more than 4,500,000 tires. The increased employment thus made possible was, however, not sufficient to balance the loss in labor time required due to the increase in the man-hour output, with the result that the average number of wage earners employed in the industry decreased to 78,256 in 1927, as compared with 81,640 employed in 1925.

From 1927 through 1929 the very large annual increases from year to year in the total number of tires produced were again sufficient not only to overcome the downward employment tendency caused by the continued increase in the man-hour output but to increase the number of wage earners, the average for the year 1929 being 83,263. The statistics for 1931, however, show an entirely different situation. Production fell from 70,189,000 tires in 1929 to slightly less than 50,000,000 tires in 1931, or nearly 30 per cent, while the number of wage earners employed fell from 83,263 to 48,341, or 42 per cent. The difference between the proportional decreases in the total production and the total number of wage earners employed in the tire

industry was due to the very large increase in the output per man-hour, as witnessed by the rise from an average of 837.8 tires produced per wage earner per annum in 1929 to 1,013.4 tires per wage earner in 1931.

The data obtained in the present survey show a similar trend, indicated in Table 7. The average number of wage earners in the six plants covered showed a continuous increase from 1921 through 1929, dropped in 1930, and took another substantial fall in 1931, though not so large a one as during the previous year.

TABLE 7.—NUMBER OF EMPLOYEES, AND INDEX NUMBERS THEREOF, IN SIX TIRE PLANTS, 1921 TO 1931

Year	Employees in 6 tire plants	
	Monthly average ¹	Index number (1926=100)
1921 ²	23,423	60.22
1922	28,598	73.52
1923	32,465	83.46
1924	32,191	82.76
1925	39,593	101.79
1926	38,897	100.00
1927	40,665	104.55
1928	42,637	109.61
1929	45,453	116.85
1930	35,815	92.07
1931	29,756	76.50

¹ Covers all employees, including those working on tires, tubes, and miscellaneous rubber products.

² Last 6 months only.

In this connection it should be pointed out that the situation as regards the wage earners in the six plants covered does not fairly represent that in the manufacture of tires. The census figures of employment for the whole industry, quoted above, cover the workers engaged in the manufacture of tires and tubes only. The plants covered by the bureau's survey, however, produce not only tires but also other rubber products, such as rubber belts, hose, heels, drug and miscellaneous sundries, and the employees in these plants, shown in Table 7, also include those working on the other articles mentioned. As some of these articles were not produced during the entire period covered by the survey, the figures of labor enrollment in the six plants are therefore not strictly comparable from year to year. Again, during 1930 and 1931, few of the plants worked full time, some averaging not over three days per week. For these reasons the total labor enrollment figures in the six plants, while reflecting the general employment situation there, may not represent the situation due to conditions in the production of tires only.

A much better barometer for the measurement of the reduction in the total labor time required in these six plants is afforded by the actual total man-hours worked in the production of tires. In 1922 the six plants combined produced 18,320,000 tires with an expenditure of 26,165,000 direct productive man-hours. From 1922 through 1925 the total production grew each year, and the total man-hours required also showed a continuous increase in spite of the increase in the man-hour output from 11.29 to 13.77 pounds (as shown in Table 5). In 1926 the total production of the six plants was increased by only

slightly less than 1,000,000 tires. This small increase in the total production was not sufficient to balance the reduction in the labor-time requirements caused by the increase in the output per man-hour and the total labor time was reduced from 33,860,000 hours in 1925 to 30,427,000 hours in 1926. In 1927 the total production of the six plants was increased by slightly less than 3,500,000 tires, with the result that in spite of the 14 per cent increase in the pounds output per man-hour there was also a 5 per cent increase in the total man-hours worked, although this total was nearly 2,000,000 man-hours smaller than in 1925. During 1928 the total production of the six plants was again increased by more than 6,000,000 tires, the largest increase in any one year, and an additional 11 per cent increase in the pounds output per man-hour was again accompanied by a 13 per cent increase in the total man-hours worked. This year marked the expenditure of the greatest amount of labor time in the 6 plants during the period from 1922 to 1931.

In 1929 the situation was similar to that of 1926. The small increase of less than 300,000 tires in the total production of the six plants was not sufficient to overcome the continuous reduction in labor-time requirement caused by an increase in the output per man-hour and the total man-hours worked fell from 35,885,000 in 1928 to 35,167,000 in 1929. This change marked the beginning of a new trend as far as employment of labor in these plants is concerned. In 1930 their total production was reduced by nearly 8,000,000 tires. The reduced production, combined with a much larger increase in the output per man-hour than registered in any previous year, reduced the total labor time worked to 26,166,000 man-hours, a drop of more than 25 per cent from 1929. In 1931 the total production of the six plants dropped only 864,000 tires, but the increase in the man-hour output during that year was so large that the total man-hours worked were reduced to 21,150,000, a drop of nearly 20 per cent from the 1930 total. The decrease in the total man-hours required in 1931 was due almost exclusively to the technological changes which occurred in the six plants during that year.

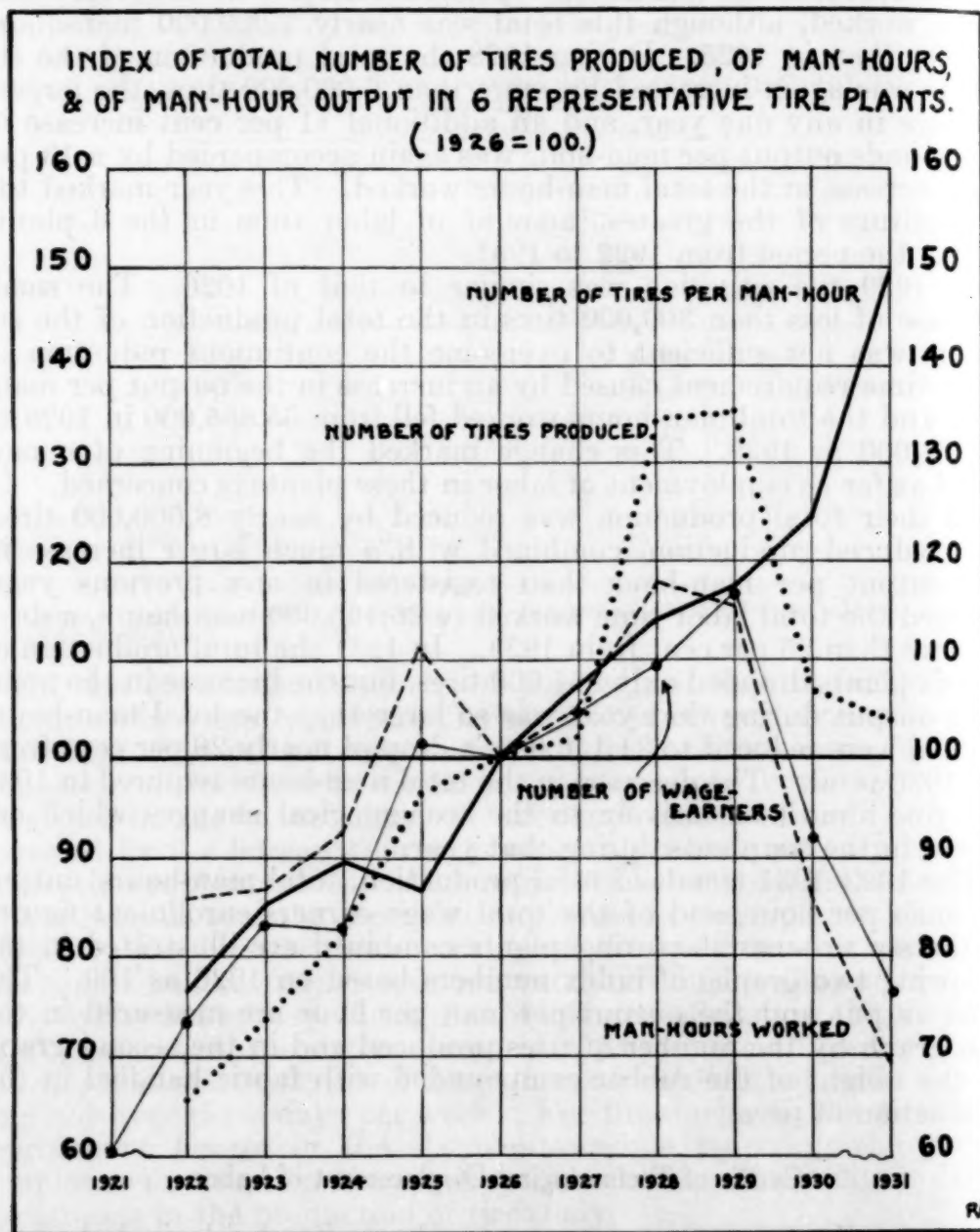
The 1922-1931 trends of total production, total man-hours, output per man per hour, and of the total wage earners enrollment figures of the six tire-manufacturing plants combined are illustrated in the following two graphs of index numbers based on 1926 as 100. The total output and the output per man per hour are measured in the first graph by the number of tires produced and in the second graph by the weight of the rubber compounded with fabric handled in the production of tires.

Causes of Technological Displacement of Labor

As USED in the present survey, the phrase "technological change" is defined to include all changes—whether in nature of the product, method of production, type of labor, hours worked, machinery and equipment used, etc.—which result in higher productivity per man-hour. This is in accordance with the actual conditions in the plant where seldom, if ever, is it possible to segregate any one factor as "the cause" of the increased productivity of labor in the plant. In some cases major changes, such, for instance, as the invention of the Owens bottle-blowing machine in the glass industry, the dial-tele-

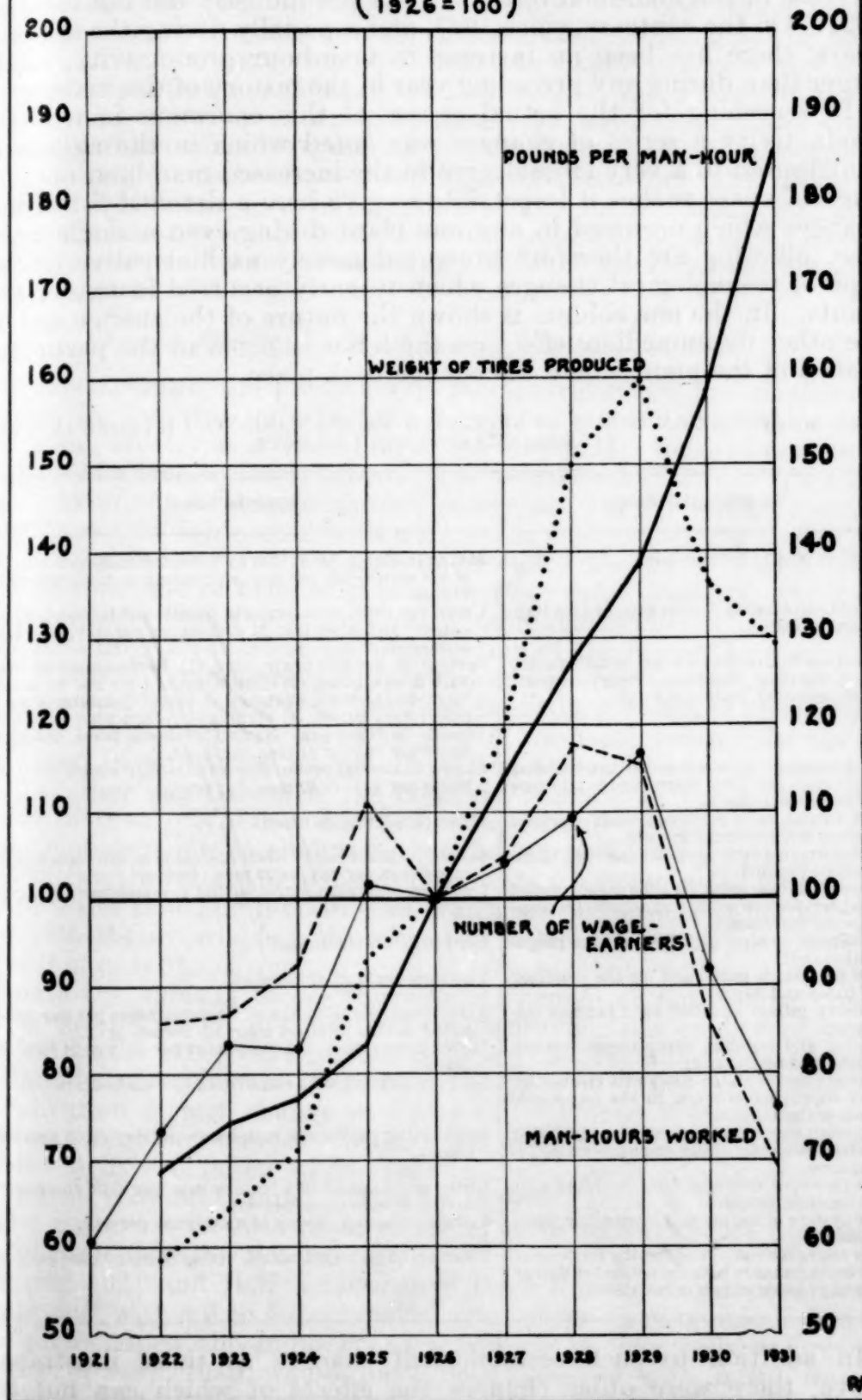
phone system, or the introduction of "canned" music in the moving-picture theaters, are revolutionary in scope and are responsible for abrupt and very large displacements of workers in their respective fields. Such changes, however, do not occur very frequently in any one industry.

Much more important from the point of view of labor employment are the smaller and more frequent changes which occur in large and



small plants alike, day after day, increasing the output per worker in one part of the plant, eliminating one worker here or a group of workers there, and thus constantly reducing the labor time required per unit of output. The tire industry offers an instance in which the increased productivity of labor was due more to the so-called evolutionary small changes in production than to any revolutionary change in the process of tire manufacturing. Essentially there has been but one major change in the manufacture of pneumatic tires, and that

INDEX OF TOTAL WEIGHT OF TIRES PRODUCED, OF MAN-HOURS
& OF MAN-HOUR OUTPUT IN 6 REPRESENTATIVE TIRE PLANTS.
(1926=100)



occurred when the core process of tire building gave place to the flat-drum process. In some plants this change occurred as early as 1919. By 1927 practically all of the major plants in this country had already adopted the drum process of carcass building. But the increase in the man-hour output in the tire industry did not cease in 1927. On the contrary, since 1927, and especially during the last two years, there has been an increase in man-hour productivity, much larger than during any preceding year in the history of tire making.

In searching for the actual causes of this enormous increase in productivity a series of changes was noted which in the aggregate contributed to a very large degree to the increased man-hour output. Lack of space makes it impossible to give here a detailed list of the changes which occurred in any one plant during even a single year. The following are therefore presented merely as illustrative of the type of technological changes which recently occurred in two of the plants. In the one column is shown the nature of the change and in the other its immediate effect on the labor engaged in the particular branch of the plant where the change took place.

TABLE 8.—EFFECT ON LABOR OF SPECIFIED TECHNOLOGICAL CHANGES IN TWO TIRE-MANUFACTURING PLANTS

Technological change	Effect on labor
3 rubber plasticators installed.....	Saving in direct labor, due to increased man-hour output, of 328 man-hours per day, equivalent to displacement of 41 men.
Liquid soapstoning devices installed for Banbury mixers.	1 man per shift, who formerly soapstoned by hand, eliminated. Labor saving, 24 man-hours per day, or 3 men displaced.
Direct method of tire building installed using gum-inserting machines, rotary cutters, compensators, liner stands, etc.	Savings in normal production: (1) Replacement of male with female labor, (2) elimination of time lost by assemblers due to stock changes, (3) direct handling of stock from rotary cutter, (4) elimination of trucking assembled bands to tire room. Saving in direct labor, 248 man-hours per day, or 31 men displaced.
Compensators installed on 40 tire-building machines, and room rearranged to take care of increased output.	Saving in normal production estimated to exceed 416 man-hours per day, or 52 men displaced.
Five curing units equipped with overhead conveyors, tire removers, etc.	5 men per shift eliminated.
Curing room rearranged to take care of increased production.	Saving in direct labor, when operating at full capacity, 173 man-hours per day, or 22 men displaced.
Preparation conveyor in tube room moved and service conveyor and automatic soapstoning rearranged.	2 girls per shift eliminated, saving 48 man-hours per day.
6 automatic cutters installed on tube preparation unit.	1 girl per shift eliminated.
New tray skids purchased for the handling of tubes and flaps.	2 bookers per shift eliminated.
Banbury mixers installed for 2 tandem calenders.	2 truckmen, 8 millmen, and 6 compounders per day eliminated, saving in direct labor 128 man-hours.
Cutting and rerolling departments consolidated and rearranged.	Direct labor saving, 112 man-hours per day, or 14 girls displaced.
Festoons and working platforms erected for the supplying of stock to the automatic unit of tire building.	3 supply girls per shift eliminated, 72 man-hours per day.
20 modern shoulder-drum machines installed to replace old flat-drum machines for building tires.	Direct labor saving 600 man-hours per day or 75 men displaced.
Tire conveyor extended from building unit to painting machine.	1 trucker and one-half a loading man per shift eliminated, saving 36 man-hours per day.
New system of sorting and assembling tubes installed.	6 girls eliminated, saving 64 man-hours per day.
Two conveyor units, one for the purpose of assembling inner tube valves and the other for the testing of valves installed.	5 men and 5 girls eliminated, saving 80 man-hours per day.

In addition to such technological changes as those illustrated above, there were other changes the effects of which can not be measured precisely. Among these may be mentioned the sharp

reduction in the labor turnover in the plants, the elimination of the less efficient machines and less efficient workers, and the introduction of the so-called motion time studies in several of the plants included in the survey. The motion time study consists in analyzing to the minutest degree the individual movements and operations each worker is required to make in the process of performing his or her task. The workers are then instructed to follow precisely the requirements set in the time analysis, thus eliminating a large proportion of what is known as waste motion. Automatic machinery and especially automatic conveyors are geared to the standard of output set for the workers around the machine or the conveyor. It is frankly admitted by the managers and engineers in charge of operations that during the last year these motion time studies have been, more than any other factor or factors, responsible for the increased output per man-hour.

Factors Affecting Reemployment of Displaced Workers

IN CONSIDERING the prospects of reemployment of the displaced workers in the tire industry the present depressed conditions of American industry as a whole and of the automobile trade in particular, both of which seriously affected the tire industry, are disregarded here. Assuming a return to normal conditions, the tire industry will, nevertheless, be confronted with a situation which makes it doubtful whether the industry will be able to reemploy the workers who lost their jobs because of technological changes or other reasons. On the one hand there is the slow but steady improvement in the quality of tires, resulting in considerable prolongation of the life of the average tire. Tires are purchased for their mileage qualities only, and while improvement in the tire may have the immediate result of increased sales for the plant producing it, in general the total demand for tires is reduced in proportion as the life of the average tire is increased. On the other hand there is the constant increase in the man-hour output of tires. Whether due to new and improved machinery, to better management, to elimination of the least efficient plants or the least efficient workers, to a speed-up process resulting in the elimination of waste time and motion—the result is a larger output per man-hour with the invariable concomitant of reduced labor requirements per unit of output. From the point of view of labor employment, the tire industry appears to be “burning its candle at both ends,” reducing the total demand for tires by improving the quality of the tire and at the same time further reducing the demand for labor by continually increasing the output per man-hour. There is at present no indication of any change in this trend. Unless there is an unforeseen, enormous increase in the total demand for tires, or unless definite steps are taken to increase the volume of employment in the industry by shortening the hours of work there is bound to be further reduction in total requirement of labor and therefore further unemployment in the tire industry.

During 1931 and 1932 a number of large tire plants adopted the 6-hour shift with a 3 to 4 day weekly average for all of its employees. This plan helped the industry to retain on its pay rolls a larger number of men than would have been possible with a full-time schedule. But at the same time it considerably reduced the average

weekly earnings of the workers, in some cases to the extent of seriously endangering their standard of living. The shorter shift and the shorter week accompanied by adjustments in the hourly rates of wages, may result in an increase in the labor cost of tire production. This is not an impossible development in an industry which for more than a decade has diverted to the consumer nearly all the benefits arising from the improved quality of the tire and from the labor savings caused by technological changes, in terms not only of a better tire but also of much reduced prices per tire. According to the Census figures the 1921 average value of a tire and tube combined was \$17.91. In 1929 the value per tire and tube combined was \$9.63, and in 1931 it was only \$7.19, or about 40 per cent of its 1921 value. Again in 1914 the average consumer's price of a tire and tube combined was about \$30.50, in 1929 it was \$15.70, and in 1931 only \$12.07.

It is quite possible that in the past the continuous reduction in the price of tires acted as a stimulus for an increase in the total demand for tires. But with the present conditions in the tire industry and the prevailing low price of tires, any further reduction in the price can have only a very slight influence, if any, on the total demand for tires. By eliminating cutthroat competition and establishing a more or less stabilized price per tire, it would be possible for the tire manufacturers to divert some of the benefits arising from a further improvement in the quality of tires or additional savings in labor toward the employment of a larger volume of labor and a shorter working week. This alone will safeguard the industry from further increases in the ranks of its unemployed workers.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF

Junior Employment Problems Under Present Industrial Conditions

THE difficulties confronting those engaged in finding jobs for younger boys and girls were discussed by Clare L. Lewis, director of the New York State Division of Junior Placement, at the annual convention of the International Association of Public Employment Services, held in Washington, D. C., the latter part of September, 1932. A résumé of this paper is given below.

Since July, 1929, the New York State Employment Service has had special placement machinery for applicants between 14 and 20 years of age. This machinery includes 17 employment offices—10 in New York City, 3 in Buffalo, 2 in Albany, 1 in Syracuse, and 1 in Rochester. Twelve of the 17 are located in continuation schools and the other 5 in State employment bureaus for adults. The junior offices have a staff of 33 interviewers especially trained in dealing with boys and girls and familiar with the class of work opportunities available for adolescents. With this foundation it is hoped eventually to build up an adequate information and placement service for the juniors of the State. Launched on the very eve of the business slump, however, the junior employment agency has had to contend with difficulties which ordinarily would either not have occurred at all or else appeared in a very different or considerably less acute form.

Problem of Increase in Number of Applicants

THE number of boys and girls seeking jobs is growing enormously. Dire necessity at home has forced many of them to seek a job. Under existing conditions, however, work opportunities for children are, of course, very limited. The vast majority of the 14,000 young people who applied to the New York State employment offices in 1931 had been out of school from three months to a year, and any proposal to them to go back to full-time school was in most cases "a waste of breath." For instance, when boys and girls arrive at an employment office minus breakfast and car fare and when they faint with hunger while they wait, "any attempt to send them back to school has its difficulties. Talking to a hungry child about the advantages of further education when his one desire is a job is simply worse than a farce." Moreover, there are always children among these young job seekers who have been misfits in the existing school system.

Even when children are able and willing to return to full-time school, however, the schools are not always equipped to receive them. The schools frequently do not want children who have been away from school for some time and desire to reenter in the middle of a

term, and the return of jobless juniors to full-time school can be worked out in only a small percentage of cases.

The junior placement officers feel, however, that at a period like the present they not only should give each of these younger job seekers a careful individual interview and make every possible effort to return him to school or to find him work, but should also make suggestions as to the most profitable use of idle time. The great problem at present is to keep up the morale of these children so that they may continue fit for employment; in this the continuation schools have helped.

Methods of dealing with the situation differ somewhat from school to school, but briefly stated, the plan in its main essentials is this. Boys and girls who formerly waited idly in the school employment office day after day are now assigned to some class in the school. This class they may attend every morning, or they may come full time if they choose, and with the assurance meanwhile that, if jobs can be found by the employment office, they will be called immediately. Unemployed boys and girls are supposed to attend continuation school 20 hours a week, but this law is frequently not well enforced. By the plan I have outlined, however, children are kept within a moment's call if jobs do become available, but meantime they are putting in their waiting time to advantage.

In junior placement offices not located in the continuation schools the problem is not an easy one. In one city applicants are encouraged to use the near-by facilities of the Y. M. C. A. and the Y. W. C. A. and the public library. In another office, not far from a continuation school, the older boys use the school swimming pool or wait in an auditorium where a teacher is in attendance and where interesting discussions and programs of different kinds are being carried on. In other offices reading material and various games have been provided in the waiting room.

Problem of Different Types of Applicants

THE problems arising from the different types of applicants are outlined below:

Would-be clerical workers who desire to fold and inclose letters, check mailing lists, make out price tags, do a little filing, etc., constitute a perennial difficulty. Too frequently such applicants are immature girls, perhaps with foreign backgrounds and very restricted education, who might be quite successful in the factory work they dislike even if they could get it, but who can not be expected to make good office workers. There never is enough of this particular work to meet the demand even under normal conditions, and at present the young untrained girls who insist on getting such work are simply on a futile quest.

The all-too-familiar problem of the applicant under 16 years of age grows increasingly hard to solve. At present employers are calling for older and more experienced workers. "The younger the applicants the scarcer the jobs."

At this time it is particularly difficult to get satisfactory jobs for recent high-school graduates. "Perhaps nowhere does one find at present a group that is more utterly discouraged, more completely and helplessly at sea." These young people have in many cases struggled to get their education, and parents have made sacrifices in order that these children might get their high-school diplomas, which it was felt would facilitate the finding of good jobs. And now these boys and girls, if they get work at all, must either accept the most elementary

kind of routine work at half the salary they had hoped for or if they are willing to take factory employment they must see other young people with less education but more experience preferred over them. They constantly ask "What kind of training can I take that will get me a job?"—a question which, unfortunately, the interviewers at the junior placement offices find it no easy matter to answer. This recurring interrogation emphasizes more strongly than ever before "the need for more concrete and up-to-date information about occupations."

Problems Connected with the Job

THE scarcity of junior jobs, already noted, is caused not only by the decrease of jobs in general but also by the fact that many positions previously open to boys and girls are being taken by older workers. Though there still remain some jobs for boys and girls, much more effort is required to find them.

There is also the matter of the unsuitability of the work opportunities. Included among these are jobs offered by unscrupulous employers who exploit children. As an instance, a firm stating that it was a purveyor of drugs, such as iodine, peroxide, etc., called for boys to sell its wares from door to door for a commission of 50 per cent. The offer seemed attractive and in one office 14 boys said they wished to try the job. They were accordingly sent out.

In a day or two, however, they began to return to the office, all bringing the same report. The employer had 50 boys or more and had divided them into squads—each under a crew manager. The crew managers then told them that—in going from house to house—each boy was to plead that his father was in the hospital and that he was the oldest of a large family and their sole support and on this basis urge the housewife to buy his wares. If the boys demurred at telling such untruths, and some did, one manager took them to the window and showed them a huge limousine standing outside saying "There—see that—that's mine—and I earned it doing just this kind of work—you can, too"—and, naturally, to a youngster such temptation is great. The boys were further told that they were all to be furnished with fake badges from a nonexistent orphan asylum and also that they would be supplied with a paper which we later saw and which purported to be an agreement between the drug firm and the Volunteers of America saying that 10 per cent of the proceeds from the sale of the drugs went to that organization. This last was an entire falsehood, as we found on checking up, but the boys were told to show these papers if they were picked up by a cop for peddling.

Certain other kinds of work also present special problems. This is particularly true, for instance, of general housework. Before the existing depression the housemaid problem was of little consequence in junior placement offices because very few of the younger girls would consider such a job. Now, however, in many cases necessity has forced them to accept openings of this kind, and the placement offices are confronted with fresh difficulties as the exploitation of younger workers is not confined to industrial employment. Many housewives demand of immature and untrained girls as much or more service than they formerly required from adult housemaids who will not work for the low wages offered. As a consequence, there are constant complaints from both the girls and the employing housewives. "In fact, the whole situation in the housework field—as far as the younger girl is concerned—is pure chaos, and it seems to us will continue to be so until girls can be sent out who have enough definite practical training for this sort of work so that we can demand for them minimum standards in the way of wages, hours, and living conditions. Only then will a solution of the housework situation be a possibility."

The percentage increase in temporary work opportunities multiplies the difficulties of both junior and adult employment offices. In the case of junior wage earners, however, this considerable increase in temporary jobs means that there are a great many more impediments in the way of children's getting some kind of worthwhile start in their working life than there were before the depression. The temporary character of many of the jobs to be had means that in addition to the number of children the junior employment office has not been able to place at all, there is a constant stream of those who have been placed returning for replacement and requiring constant encouragement to their morale.

The situation with reference to younger job seekers is still further complicated by the ever-growing demands of employers in regard to personal appearance, education, and experience. As a result, while younger boys and girls may not be wholly ineligible when a good job becomes available, special care must often be exercised if the job seeker is to qualify. "Getting an applicant to qualify is often not simply a matter of selection but a matter of actually taking a child in hand and making him over to meet the requirements * * * we frequently are dealing with youngsters who not only come from families whose means are limited but who simply never have been taught what is essential to the job seeker, particularly in the way of personal appearance and general cleanliness. In meeting situations of this sort the continuation schools have proven immensely helpful."

Emergency Planning and Research Bureau for Boston Architects and Engineers

IN THE early part of 1932 the engineering societies of Boston and the Boston Society of Architects jointly organized the Emergency Planning and Research Bureau (Inc.), taxing themselves to raise funds to aid the most worthy and needy members in the professions represented by these societies. The following brief account of the work done by this bureau is taken from a pamphlet recently published, entitled "An appraisal and a citation for distinguished service for their community by the engineering and architectural societies in Boston."

Financing and Cost of Work

DESPITE the fact that architects and engineers "were particularly hard hit" by the depression and that business prospects were of the gloomiest, the former raised \$34,221.36 and the latter \$72,004.04, with a view to aiding their unemployed colleagues through an emergency planning and research agency. A few persons outside the two professions who approved the results of the bureau's activities also contributed, and the total amount available for the work reached \$112,276.64.

General expenses have been kept at a minimum, amounting to less than 4 per cent, leaving 96 per cent of the contributions for wages.

Persons Aided

THERE have been 1,322 applications for employment. The bureau has secured positions for 171 persons and given direct employment to 389.

Those employed by the bureau have been paid, up to a short while ago, \$15 for a 5-day week. For the purpose of conserving the funds, however, wages have been decreased through part-week employment to \$10 for architects and \$9 for engineers.

No one but those having close contact with the work of the bureau can realize the revivifying effect on the individuals afforded by even this meager assistance. To do so one must visualize the situation of a man especially trained for the detail work of his profession, when, in a time of depression, the activity of that profession drops 80 per cent. * * *

This is not an imaginary picture. The men who have been helped are not careless men who lack ability. They are men who are the victims of circumstance. Their present situation is no measure of their deserts.

Types of Work Done

THE committees responsible for the relief work set out to discover employment of the kind for which the bureau's applicants were educated and trained and which at the same time would not be in competition with the work of men having permanent positions. Such committees found a great community need for the very class of work these unemployed architects and engineers were equipped to do. State and city commissions required vital information but lacked the appropriations to secure the data. State institutions were in need of surveys and plans of their water, sewerage, electrical, heating, and refrigerating systems. Among other direct and specific wants were the following: Maps of recent street changes for the Boston Planning Board; tabulations of data on forest fires and weather conditions for the Weather Bureau; plans brought up to date for the State reclamation bureau; a study of new metals and their uses; a study of highway grades in congested areas; a study of the salvage of scrap metal and observations of actual wind pressure for the Boston Society of Engineers; information on governmental costs for the National Economy League; and data on labor costs of buildings and highways for the Massachusetts State Commission on Stabilization of Employment.

Study of Boston metropolitan area.—Work upon these particular problems resulted in a broader outlook as to the possibilities of the bureau. New York, Chicago, Philadelphia, Cleveland, and Rochester have found it advisable to study their community problems in order to make systematic plans for future development. The gathering of data was the most costly expense item in such studies. For less than 25 per cent of the cost to the above-mentioned cities the bureau is securing information "which must be used if planning of the Boston metropolitan area is carried out on the scale found necessary by these other communities." It is not easy to estimate the money value to Boston residents of the work already accomplished by the bureau "but it must run well into six figures."

It was realized that the population trends in any section of the country could not be forecast without a knowledge of the history of population movements in the component parts of such section. The bureau therefore undertook to find out what facts were available in

the various parts of New England and what additional facts were requisite, if in the future systematic planning of the whole metropolitan area were attempted. It was decided to assemble all available data that promised to be valuable in planning the systematic development of Boston or of the metropolitan area. The information thus assembled is listed in Appendix B of the publication under review and is reported as probably the most complete and the most interesting collection of data relating to Boston and the metropolitan area anywhere available.

The study of Boston and the metropolitan area leads logically to studies of the relation of such areas to the remainder of the State and to the rest of New England, and in this connection the work already done by the bureau demonstrates what "can be accomplished in visualizing the facts from which competent men can make wise decisions in regard to the future development of this section of the State."

Architects' study of housing.—The architects have not only aided in the engineering studies but have worked energetically along their own lines. In view of the widespread interest in the elimination of slums, cheap housing, and improved city planning, the architects turned their attention to a study of these problems.

They have used all their ingenuity in devising new methods of housing, have designed, estimated, and appraised the value of the various methods of attack on the housing problem. Through their efforts there is a wider knowledge of the possibilities—and equally important—of the limitations of practical endeavor, toward the end that our people may be better housed. The bureau has been a laboratory in which ideas are weighed and tested, and information obtained, not for individual gain but for the benefit of the community. It is certain that our knowledge of housing, of land development, and of city planning has been greatly increased through these studies.

The architects' survey of housing in dilapidated sections of the city led to the study of the sociology and economics influencing such housing conditions. The resultant clear understanding of the limitations and possibilities involved in the elimination of slums will no doubt save the city mistakes and disappointments which would have been inevitable without this study.

If the purpose of the Boston engineers and architects had been to set up a school for training advisers for their community, it would have been difficult to work out a more effective scheme.

The men who have taken an active part in the bureau's administration heartily acknowledge their enthusiasm and joy in the task. "They only regret their inability to make clear to others outside the professions their conviction of the genuine value of the work of the bureau, not only to the men employed but in far greater degree to the community itself."

Unemployment in Foreign Countries

THE following table gives detailed monthly statistics of unemployment in foreign countries, as shown in official reports from October, 1930, to the latest available date:

EMPLOYMENT CONDITIONS—UNEMPLOYMENT RELIEF 1275

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES

Date (end of month)	Australia		Austria	Belgium			
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment-insurance societies			
	Number	Per cent		Wholly unemployed		Partially unemployed	
				Number	Per cent	Number	Per cent
1930							
October	(1)		192, 778	27, 322	4. 3	54, 804	8. 5
November	(1)		237, 745	38, 973	6. 1	76, 043	12. 0
December	104, 951	23. 4	294, 845	63, 585	9. 3	117, 167	17. 0
1931							
January	(1)		331, 239	77, 181	11. 1	112, 734	16. 2
February	(1)		334, 041	81, 750	11. 7	121, 906	19. 4
March	113, 614	25. 8	304, 084	81, 305	11. 3	125, 972	17. 7
April	(1)		246, 845	70, 377	10. 0	110, 139	15. 6
May	(1)		208, 852	56, 250	7. 9	97, 755	13. 8
June	118, 424	27. 6	191, 150	62, 642	8. 9	101, 616	14. 4
July	(1)		194, 364	64, 644	9. 1	116, 747	16. 3
August	(1)		196, 321	70, 893	9. 9	120, 669	16. 8
September	120, 694	28. 3	202, 130	74, 175	10. 3	119, 433	16. 6
October	(1)		228, 101	82, 811	11. 3	122, 733	16. 8
November	(1)		273, 658	93, 487	13. 3	134, 799	19. 2
December	118, 732	28. 0	329, 627	128, 884	17. 0	159, 941	21. 1
1932							
January	(1)		358, 114	153, 920	20. 0	179, 560	23. 2
February	(1)		361, 948	168, 204	21. 3	180, 079	22. 8
March	120, 366	28. 3	352, 444	155, 653	19. 4	185, 267	23. 0
April	(1)		303, 888	152, 530	18. 8	183, 668	22. 6
May	(1)		271, 481	160, 700	18. 9	191, 084	22. 5
June	124, 068	30. 0	265, 040	153, 659	18. 7	173, 819	21. 2
July	(1)		266, 365	169, 411	19. 6	174, 646	20. 3
August	(1)		269, 188	167, 212	19. 5	170, 081	19. 9
September	122, 340	29. 6	275, 840	163, 048	18. 3	166, 160	18. 9
October			297, 791				

Date (end of month)	Canada	Czechoslovakia		Danzig (Free City of)	Denmark	
	Per cent of trade-unionists unemployed	Number of unemployed on live register	Trade-union insurance funds—unemployed in receipt of benefit	Number of unemployed registered	Trade-union unemployment funds—unemployed	
			Number		Per cent	Number
1930						
October	10. 8	122, 379	61, 213 5. 5	17, 307	32, 880	11. 4
November	13. 8	155, 203	65, 904 5. 9	20, 272	44, 200	15. 3
December	17. 0	239, 564	93, 476 8. 3	24, 429	71, 100	24. 6
1931						
January	16. 0	313, 511	104, 580 9. 5	27, 081	70, 961	24. 2
February	15. 6	343, 972	117, 450 10. 0	28, 192	73, 427	26. 0
March	15. 5	339, 505	119, 350 10. 0	27, 070	67, 725	22. 1
April	14. 9	296, 756	107, 238 8. 9	24, 186	45, 698	15. 3
May	16. 2	249, 686	93, 941 7. 6	20, 686	37, 856	12. 3
June	16. 3	220, 038	82, 534 6. 6	19, 855	34, 030	11. 3
July	16. 2	209, 233	82, 759 6. 6	20, 420	36, 369	11. 8
August	15. 8	214, 520	86, 261 6. 9	21, 509	35, 060	11. 8
September	18. 1	228, 383	84, 660 6. 7	22, 922	35, 871	12. 1
October	18. 3	253, 518	88, 600 6. 9	24, 932	47, 196	16. 0
November	18. 6	336, 874	106, 015 8. 2	28, 966	66, 526	22. 3
December	21. 1	480, 775	146, 325 11. 3	32, 956	91, 216	30. 4
1932						
January	22. 0	583, 138	186, 308 14. 0	34, 912	105, 600	35. 1
February	20. 6	631, 736	197, 612 14. 8	36, 258	112, 346	37. 3
March	20. 4	633, 907	195, 076 14. 6	36, 481	113, 378	37. 5
April	23. 0	555, 832	180, 456 13. 3	33, 418	90, 704	29. 9
May	22. 1	487, 228	171, 389 12. 6	31, 847	79, 931	26. 1
June	21. 9	466, 948	168, 452 12. 3	31, 004	80, 044	25. 6
July	21. 8	453, 294	167, 529 12. 2	29, 195	92, 732	29. 5
August	21. 4	460, 952	172, 118 12. 5	28, 989	95, 770	30. 5
September	20. 4	479, 912		30, 469	96, 076	30. 4
October						

¹ Not reported.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Estonia	Finland	France	Germany			
	Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered	Trade-unionists		
					Per cent wholly unemployed	Per cent partially unemployed	Number unemployed in receipt of benefit
1930							
October.....	3, 282	10, 279	1, 663	3, 252, 000	23. 6	15. 4	2, 071, 730
November.....	5, 675	10, 740	4, 893	3, 683, 000	26. 0	16. 1	2, 353, 980
December.....	6, 163	9, 336	11, 952	4, 384, 000	31. 7	16. 9	2, 822, 598
1931							
January.....	5, 364	11, 706	28, 536	4, 887, 000	34. 2	19. 2	3, 364, 770
February.....	4, 070	11, 557	40, 766	4, 972, 000	34. 5	19. 5	3, 406, 979
March.....	2, 765	11, 491	50, 815	4, 756, 000	33. 6	18. 9	3, 240, 523
April.....	2, 424	12, 663	49, 958	4, 358, 000	31. 2	18. 0	2, 789, 627
May.....	1, 368	7, 342	41, 339	4, 053, 000	29. 9	17. 4	2, 567, 732
June.....	931	6, 320	36, 237	3, 954, 000	29. 7	17. 7	2, 353, 657
July.....	634	6, 790	35, 916	3, 976, 000	31. 0	19. 1	2, 231, 513
August.....	933	9, 160	37, 673	4, 215, 000	33. 6	21. 4	2, 376, 589
September.....	2, 096	12, 176	38, 524	4, 355, 000	35. 0	22. 2	2, 483, 364
October.....	5, 425	14, 824	51, 654	4, 623, 480	36. 6	22. 0	2, 534, 952
November.....	7, 554	18, 095	92, 157	5, 059, 773	38. 9	21. 8	2, 771, 985
December.....	9, 055	17, 223	147, 009	5, 668, 187	42. 2	22. 3	3, 147, 867
1932							
January.....	9, 318	20, 944	241, 487	6, 041, 910	43. 6	22. 6	3, 481, 418
February.....	9, 096	18, 856	293, 198	6, 128, 429	44. 1	22. 6	3, 525, 486
March.....	8, 395	17, 699	303, 218	6, 034, 100	44. 6	22. 6	3, 323, 109
April.....	6, 029	16, 885	282, 013	5, 934, 202	43. 9	22. 1	2, 906, 890
May.....	4, 896	13, 189	262, 184	5, 582, 620	43. 3	22. 9	2, 658, 042
June.....	3, 137	12, 709	232, 371	5, 475, 778	43. 1	20. 4	2, 484, 944
July.....	2, 022	13, 278	262, 642	5, 392, 248	43. 9	23. 0	2, 111, 342
August.....	3, 256	16, 966	264, 253	5, 223, 810	44. 9	23. 2	1, 991, 985
September.....	5, 957	18, 563	259, 237	5, 102, 750	43. 6	22. 7	1, 849, 768
October.....			247, 090	5, 109, 439			
Date (end of month)	Great Britain and Northern Ireland				Great Britain	Hungary	
	Compulsory insurance				Number of persons registered with employment exchanges	Trade-unionists unemployed	
	Wholly unemployed		Temporary stop-pages			Christian (Buda-pest)	Social-Democratic
	Number	Per cent	Number	Per cent			
1930							
October.....	1, 725, 731	13. 9	593, 222	4. 8	2, 200, 413	999	22, 914
November.....	1, 836, 280	14. 8	532, 511	4. 3	2, 274, 338	975	23, 333
December.....	1, 853, 575	14. 9	646, 205	5. 3	2, 392, 738	935	24, 648
1931							
January.....	2, 044, 209	16. 5	618, 633	5. 0	2, 613, 749	953	26, 191
February.....	2, 073, 578	16. 7	623, 844	5. 0	2, 627, 559	965	27, 089
March.....	2, 052, 826	16. 5	612, 821	5. 0	2, 581, 030	996	27, 092
April.....	2, 027, 896	16. 3	564, 884	4. 6	2, 531, 674	1, 042	27, 129
May.....	2, 019, 533	16. 3	558, 383	4. 5	2, 596, 431	843	26, 131
June.....	2, 037, 480	16. 4	669, 315	5. 4	2, 629, 215	751	23, 660
July.....	2, 073, 892	16. 7	732, 583	5. 9	2, 662, 765	876	26, 329
August.....	2, 142, 821	17. 3	670, 342	5. 4	2, 732, 434	941	28, 471
September.....	2, 217, 080	17. 9	663, 466	5. 3	2, 879, 466	932	28, 716
October.....	2, 305, 388	18. 1	487, 591	3. 8	2, 755, 559	1, 020	28, 998
November.....	2, 294, 902	18. 0	439, 952	3. 4	2, 656, 088	1, 169	29, 907
December.....	2, 262, 700	17. 7	408, 117	3. 2	2, 569, 949	1, 240	31, 906
1932							
January.....	2, 354, 044	18. 4	500, 746	4. 0	2, 728, 411	1, 182	32, 711
February.....	2, 317, 784	18. 2	491, 319	3. 8	2, 701, 173	1, 083	32, 645
March.....	2, 233, 425	17. 5	426, 980	3. 3	2, 567, 332	1, 024	31, 340
April.....	2, 204, 740	17. 3	521, 705	4. 1	2, 652, 181	961	30, 057
May.....	2, 183, 683	17. 1	638, 157	5. 0	2, 741, 306	922	28, 835
June.....	2, 145, 157	16. 8	697, 639	5. 5	2, 747, 343	960	28, 372
July.....	2, 185, 015	17. 1	735, 929	5. 8	2, 811, 782	940	28, 297
August.....	2, 215, 704	17. 4	731, 104	5. 7	2, 859, 828	947	28, 186
September.....	2, 279, 779	17. 9	645, 286	5. 0	2, 858, 011		
October.....	2, 295, 500	17. 9	515, 405	4. 0	2, 747, 006		

EMPLOYMENT CONDITIONS—UNEMPLOYMENT RELIEF 1277

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Irish Free State	Italy		Latvia	Netherlands	
	Compulsory insurance—number unemployed	Number of unemployed registered		Number unemployed remaining on live register	Unemployment—insurance societies—unemployed	
		Wholly unemployed	Partially unemployed		Number	Per cent
1930						
October.....	22,990	446,496	19,081	6,058	41,088	9.6
November.....	25,622	534,356	22,125	8,608	46,807	11.8
December.....	26,167	642,169	21,788	10,022	81,204	18.2
1931						
January.....	28,681	722,612	27,924	9,207	100,340	23.2
February.....	26,825	765,325	27,110	8,303	109,235	23.5
March.....	25,413	707,486	27,545	8,450	102,743	21.8
April.....	23,970	670,353	28,780	6,390	68,860	14.3
May.....	23,016	635,183	26,059	1,871	60,189	12.2
June.....	21,427	573,593	24,206	1,584	59,573	11.7
July.....	21,647	637,531	25,821	2,169	69,026	13.3
August.....	21,897	693,273	30,636	4,827	70,479	15.3
September.....	23,427	747,764	29,822	7,470	72,738	15.7
October.....	26,353	799,744	32,828	13,605	84,548	18.0
November.....	30,865	878,267	30,967	18,377	107,372	18.5
December.....	30,918	982,321	32,949	21,935	147,107	27.8
1932						
January.....	31,958	1,051,321	33,277	26,335	145,124	27.0
February.....	31,162	1,147,945	26,321	22,222	139,956	25.4
March.....	30,866	1,053,016	31,636	22,912	119,423	21.6
April.....	32,252	1,000,025	32,720	14,607	121,378	21.7
May.....	35,874	968,456	35,528	7,599	112,325	22.5
June.....	² 66,912	905,097	31,710	7,056	113,978	22.8
July.....	² 77,648	931,291	33,218	7,181	123,947	24.6
August.....	² 57,081	945,972	33,666	-----	116,524	22.9
September.....	² 80,923	949,408	37,043	-----	126,510	24.9
October.....	-----	-----	-----	-----	-----	-----

Date (end of month)	New Zealand	Norway		Poland	Rumania	
	Trade-unionists, number unemployed	Trade-unionists (10 unions) unemployed		Number unemployed registered with employment offices	Number unemployed remaining on live register	
		Number	Per cent			
1930						
October.....	(1)	8,031	18.0	20,363	165,154	36,147
November.....	8,119	9,396	21.4	24,544	209,912	42,689
December.....	(1)	11,265	25.5	27,157	299,797	36,212
1931						
January.....	(1)	11,692	26.3	28,596	340,718	38,804
February.....	(1)	(1)	-----	29,107	358,925	43,270
March.....	² 38,028	11,213	24.9	29,095	372,536	48,226
April.....	² 36,981	(1)	-----	28,477	351,679	41,519
May.....	² 40,507	-----	-----	25,206	313,104	33,484
June.....	² 45,264	-----	-----	22,736	274,942	28,093
July.....	² 47,772	-----	-----	20,869	255,179	29,250
August.....	² 50,033	-----	-----	22,431	246,390	22,708
September.....	² 51,375	-----	-----	27,012	246,426	22,909
October.....	² 50,266	⁴ 9,048	⁴ 19.6	29,340	255,622	28,800
November.....	² 47,535	10,577	22.8	32,078	266,027	43,917
December.....	² 45,140	12,633	27.2	34,789	312,487	49,393
1932						
January.....	² 45,677	14,160	30.4	35,034	338,434	51,612
February.....	² 44,107	14,354	30.6	38,135	350,145	57,606
March.....	² 45,383	15,342	32.5	38,952	360,031	55,306
April.....	² 48,601	14,629	30.8	37,703	339,773	47,206
May.....	² 53,543	13,465	28.3	32,127	306,801	39,654
June.....	² 54,342	12,603	26.2	28,429	264,147	33,679
July.....	² 55,203	12,563	25.9	26,390	218,059	32,809
August.....	² 56,332	13,084	26.9	27,543	187,537	-----
September.....	-----	-----	-----	31,431	147,166	-----
October.....	-----	-----	-----	-----	-----	-----

¹ Not reported.

² Registration area extended.

³ New series of statistics showing unemployed registered by the employment exchanges. Includes not only workers wholly unemployed but also those intermittently employed.

⁴ Strike ended.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Saar Ter-ritory	Sweden		Switzerland				Yugo-slavia
	Number of unem- ployed registered	Trade-unionists unemployed		Unemployment funds				Number of unem- ployed registered
				Wholly unem- ployed		Partially unem- ployed		
		Number	Per cent	Number	Per cent	Number	Per cent	
1930								
October.....	9,013	43,927	12.2	7,399	3.0	23,309	9.4	6,609
November.....	12,110	57,070	15.3	11,666	4.7	25,793	10.5	7,219
December.....	15,245	86,042	22.9	21,400	6.6	33,483	10.4	9,989
1931								
January.....	18,921	69,437	19.8	20,551	8.3	30,977	12.5	11,903
February.....	20,139	66,923	18.4	20,081	7.9	30,879	12.2	14,424
March.....	18,292	72,944	19.3	18,991	5.4	41,880	12.4	12,029
April.....	18,102	64,534	17.5	10,389	4.0	27,726	10.6	11,391
May.....	14,886	49,807	13.2	9,174	3.5	26,058	9.9	6,929
June.....	15,413	45,839	12.1	12,577	3.6	34,266	9.7	4,431
July.....	17,685	46,180	12.4	12,200	3.3	39,000	11.3	6,672
August.....	20,205	48,590	12.7	9,754	3.6	33,346	12.4	7,466
September.....	21,741	54,405	13.7	15,188	4.0	42,998	11.2	7,753
October.....	24,685	65,469	16.4	18,000	4.8	47,200	13.2	10,070
November.....	28,659	79,484	19.9	25,200	6.6	51,900	14.4	10,349
December.....	35,045	110,149	27.2	41,611	10.1	61,256	14.9	14,502
1932								
January.....	38,790	93,272	24.5	44,600	10.6	67,600	14.8	19,665
February.....	42,394	93,900	23.0	48,600	11.3	70,100	15.0	21,435
March.....	44,883	98,772	24.4	40,423	9.0	62,659	14.0	23,251
April.....	42,993	82,500	21.0	35,400	7.7	58,900	12.6	18,532
May.....	42,881	75,650	18.9	35,200	7.6	54,500	11.5	13,568
June.....	40,188	79,338	19.5	33,742	7.1	53,420	13.3	11,418
July.....	39,063	77,468	19.4	35,700	7.5	54,000	11.4	9,940
August.....	38,858	80,975	20.0	36,600	7.6	53,400	11.1	11,940
September.....	40,320							10,985

Suburban Settlements for Unemployed in Stuttgart, Germany¹

IN ACCORDANCE with the national emergency decree of October 8, 1931, the Stuttgart City Council had by November of that year formulated plans for erecting settlements on the outskirts of the city for laborers of the community and their families, with the twofold purpose of affording economic relief to the overburdened city welfare bureau and of placing in a new social environment unemployed heads of families who were not expected to find remunerative employment in the near future, if ever, under existing economic conditions.

The above-mentioned decree provided that in cases where cities made land available for settlements the State, through the German Building and Land Bank, would grant loans through municipal guarantors to unemployed for the purchase of building material for the dwellings to be erected up to 2,500 marks (\$595). In Stuttgart the original intention of the emergency decree was modified to the extent that instead of the city accepting loans from the Building and Land Bank, guaranty corporations were formed, with municipal approval, which take loans from the Building and Land Bank for the individual builders and future owners of the houses erected. The intermediary capacity of these loan corporations lasts for only the first three years after the first harvest, at which time the tenants take

¹ Report from Shiras Morris, jr., American vice consul at Stuttgart, Sept. 15, 1932.

over the loans, pay their interest charges directly to the Land Bank, and obtain title to their lots.

The loans for building material up to 2,500 marks (\$595) are granted by the Land Bank at the rate of 5 per cent, including sinking fund, with the exception of the first two years, when they are at the rate of 2 per cent. In addition to this sum, the city of Stuttgart grants loans up to 300 marks (\$71.40) for each house, and the labor of the future owners is assessed at 200 marks (\$47.60), bringing the total value of the house to 3,000 marks (\$714), the maximum limit set by law. In addition, the city provides a lot 800 square meters in area from its city lands for each house built, which lot is granted at a rental of 3 marks (71.4 cents) per 100 square meters per year to the dweller for the period of 45 years, at the end of which period the ownership of the land reverts to the city. In accordance with the above program the total charge to each tenant for his house and lot is less than 20 marks (\$4.76) per month, which in comparison with 40 marks (\$9.52), the average monthly rental paid by the same families for city tenements, shows a substantial saving. An added provision is that the occupants are exempted from all taxes during the period of their occupancy.

The erection of the house is carried on by the persons destined to live in it after completion. The membership of the community settlements is chosen by the city welfare bureau, and in its choice care is taken to include, in each construction group of 10 or 12 persons sent out, a sufficient number with the technical ability to superintend the manual labor needed and to perform themselves the more intricate building operations. Each house is built by such a group, one man exchanging his labor for that of another; the group continuing until all the houses, in which the families accounted for therein, have been completed.

The laying of gas, electric, and water lines, however, demands more manual labor than a group of ten or a dozen persons could perform. To meet this demand the city has encouraged the voluntary labor service movement (*Freiwillige Arbeitsdienst*) by accepting the services of those receiving unemployment benefits who offer their labor without compensation for the sake of having something to do. By these methods the settlements are built on city land with national means through the labor of their future owners and with the assistance of the brotherhood of unemployed.

At present 60 of the settlement houses have already been completed and are occupied by tenants and it is expected that by November, one year from the time when this plan was put into effect, 308 dwellings and gardens will be ready. Each of these houses is or will be occupied by the head of a family who, besides his wife, can be estimated to have an average of four children under 16 years of age. From the economic point of view, the 800 square meters of garden belonging to each house will enable the occupants to keep a few chickens and perhaps a goat, and to raise enough fruit and vegetables to make the family practically self-supporting during the summer months at least, and to raise a supply of such staples as potatoes sufficient for the greater part of the year.

It is admitted that no family could possibly live entirely on the yield from so small a garden plot, but the purpose of the settlements is not to set up unemployed laborers as self-sustaining farmers but to accord

them a basis of sustenance which, when times are better, they may supplement by part-time work in nearby industrial centers, in this case Stuttgart, Unterturkheim, Cannstatt, and Feuerbach; this is a type of economy which has long been practiced in this section of Germany.

From the social standpoint the settlements have everything to recommend them. Whole families are transplanted from relatively unhealthy city tenement conditions to the fresh air of the open country. The houses, though small, are hygienically constructed, with ample provisions for light and air, and are supplied with running water, gas, and electricity. In short, these settlements are the one means so far devised by which the marginal factory worker can escape with his family from the squalor of city tenement life to supportable conditions.

It is true that the 308 units so far provided for will not appreciably affect the 38,000 unemployed of the city. However, as experiments the suburban settlements have already been eminently successful, and it may be that if sufficient funds can be made available the partial ruralization of the municipal worker will be the final solution of the industrial unemployment problem in southwest Germany.

Emergency Work for Unemployed in Germany ¹

AN ACCOUNT of the emergency work being provided for the unemployed in Germany, under the direction of the Government organization, the German Company for Public Works, was given in the June, 1932, issue of the Monthly Labor Review (pp. 1297-1299). This company is authorized to make loans to public organizations in order to enable them to carry out projects which will afford work for the unemployed. The grants are made only to the amount expected to be saved in unemployment benefits and must be for projects of general economic value.

The report of the company for the fiscal year ending March 31, 1932, shows that at the end of the year the company had loans on its books amounting to 416,560,000 marks (\$99,141,280),² 5.9 per cent of which had been granted to Federal and State Government organizations, 36.2 per cent to cities, 11.1 per cent to associations of municipalities, 8.5 per cent to cooperative societies and public-service associations, 12.9 per cent to semipublic organizations, 7.5 per cent to publicly owned shipping companies, and 17.9 per cent to societies for the construction of homes for farm laborers.

Of the amount shown above, only 71,670,000 marks (\$17,057,460) have been disbursed by the company, the remainder representing old loans taken over by the company when it was formed (August 1, 1930).

The purposes of the loans made by the company itself are shown below:

	Marks	Dollars
Reclaiming and improvement of farm land, clearing forests, etc.....	6, 060, 000	(1, 442, 280)
Construction of power stations, railroads, trolley lines, pipe lines, etc.....	30, 650, 000	(7, 294, 700)
Road construction.....	25, 170, 000	(5, 990, 460)
Underground work.....	9, 790, 000	(2, 330, 020)

¹ Data are from report by C. W. Gray, American vice consul at Berlin, July 15, 1932.

² Conversions into United States currency on basis of mark = 23.8 cents.

The number of workers employed on the public works subsidized through loans of the company during the year varied from 6,000 (February, 1932) to 41,000 (June, 1931). Workers employed in this manner are as a rule hired for not longer than three months. Based on an average employment of 25,000 persons throughout the year, it may be assumed that in all 100,000 persons found work for varying periods through the activities of the company. In addition, it is estimated that some 25,000 people found employment in industries supplying raw materials and equipment for the public works so subsidized.

The balance sheet of the company showed a net surplus of 13,380,000 marks (\$3,184,440), making possible the payment of a 5 per cent dividend.

In spite of adverse financial conditions, it is reported that practically no difficulties were encountered by the company in collecting installment and interest payments, which during the year amounted to 38,500,000 marks (\$9,163,000). In certain cases considerable pressure had to be brought to bear on municipal debtors.

No specific program was drawn up by the company for the ensuing business year. It has, however, been estimated that out of its own funds the company will be in a position to extend loans amounting to 30,000,000 or 35,000,000 marks (\$7,140,000 or \$8,330,000). In addition, funds of something like 15,000,000 marks (\$3,570,000) are expected to be set aside by the Federal Bureau for Employment for grants by the company. It is believed that no provincial or State funds will be available for loans during the year.

Unemployment in Palestine Since 1926¹

THE unemployment crisis in Palestine dates back to November, 1926, according to the employment bureau of the General Federation of Jewish Labor. It was at that time that the heavy Zionist immigration resulted in a surplus of labor. The depression which then began grew much worse as European economic conditions became increasingly critical. In November, 1926, there were 2,600 unemployed, and by February, 1927, the number had reached 7,500. In the fall of 1927, however, the situation was improved by the carrying on of new works, for which plans had been presented by the federation. These works included the drainage of the Kishon, the construction of permanent farm buildings in Zionist settlements, and the Rutenberg Jordan scheme. The number of the unemployed was reduced to 4,500, and it became possible for a while to discontinue the unemployment benefit in Jerusalem, Tiberias, Haifa, and Afuleh. By the close of 1927, however, after most of the above works were completed, conditions again became grave. In Tel-Aviv, where no jobs could be secured, over 3,000 men and their families were in receipt of the dole throughout 1928.

During 1929 the number of jobless slowly grew, with occasional breaks as some temporary kind of work became available. According to official statistics, the number of unemployed rose from 4,900 in July, 1930, to 13,750 at the close of that year. By July, 1931, the figure had risen to 35,050, of whom 33,800 were Arabs and 2,250 Jews.

¹ Data are from report by H. Gordon Minnigerode, American vice consul at Jerusalem, July 30, 1932.

When it is recalled that Palestine is fundamentally an agricultural country and that the number of urban employees is estimated as not over 50,000, the number of unemployed as of July, 1931, seems exceedingly large. The author of the report cautions that these official unemployment statistics he quotes are mere estimates, "which are prone to be highly magnified."

Unemployment in Japan, 1929-1932

THE following statistics on unemployment in Japan from September, 1929, to June, 1932, are reproduced from the July, 1932, Monthly Report on Current Economic Conditions, published by the Tokyo Chamber of Commerce and Industry:

UNEMPLOYMENT IN JAPAN, SEPTEMBER, 1929, TO JUNE, 1932

Year and month	Population covered	Persons unemployed		Year and month	Population covered	Persons unemployed	
		Number	Per cent of population covered			Number	Per cent of population covered
1929:				1931—Continued.			
September.....	6,599,778	268,590	4.07	March.....	6,851,061	396,828	5.79
October.....	6,747,987	292,324	4.33	April.....	6,931,464	394,625	5.69
November.....	6,885,406	300,195	4.36	May.....	6,958,471	401,415	5.77
December.....	6,941,937	315,269	4.54	June.....	6,537,844	371,421	5.68
1930:				July.....	6,983,663	406,923	5.83
January.....	6,911,348	340,488	4.93	August.....	6,994,198	418,596	5.98
February.....	7,021,332	350,372	4.99	September.....	7,077,778	425,526	6.01
March.....	7,009,207	351,589	5.02	October.....	7,030,635	439,014	6.24
April.....	7,081,898	372,127	5.25	November.....	7,054,323	454,675	6.45
May.....	7,107,258	378,515	5.33	December.....	7,047,713	470,736	6.68
June.....	7,070,600	361,916	5.12	1932:			
July.....	7,091,220	378,484	5.34	January.....	7,001,643	485,886	6.94
August.....	7,060,460	386,394	5.47	February.....	7,001,648	485,290	² 6.92
September.....	7,076,047	395,244	5.59	March.....	6,966,132	437,757	6.80
October.....	6,936,926	374,140	5.39	April.....	7,016,645	482,366	6.87
November.....	6,894,647	350,265	5.08	May.....	7,042,642	482,109	³ 6.86
December.....	6,890,248	362,050	5.25	June.....	7,046,925	481,589	6.83
1931:							
January.....	6,888,968	371,802	¹ 6.31				
February.....	6,901,576	387,460	5.61				

¹ As given in report; percentage based on figures reported is 5.40.

² As given in report; percentage based on figures reported is 6.93.

³ As given in report; percentage based on figures reported is 6.85.

PRODUCTIVITY OF LABOR

Man-Hour Productivity in the Petroleum-Refining Industry in 1929

PRODUCTIVITY studies based on data from the Census of Manufactures for 1929 have been published for the blast-furnace and lumber industries in recent issues of the Monthly Labor Review.¹ The present article covers certain classes of establishments in the petroleum-refining industry. The method of tabulation is the same as that used in the previous articles.

Scope of Study

IN ATTEMPTING a study of man-hour productivity in petroleum refining, two difficulties present themselves. The first concerns the question of a satisfactory physical unit of measurement. Because of the fact that the products of the industry vary so greatly in relative amount, it is not practicable to employ any particular product or group of products for this purpose. In view of this, it seems that the most satisfactory unit for this industry is the quantity of crude petroleum refined, and this measure has been employed in this study.

The second difficulty concerns the classification of plants according to similarity of operating conditions and products. Petroleum is of two kinds, one having a paraffin base and the other an asphalt base. It is not possible, however, to classify the refineries upon this basis because of the fact that quite generally petroleum, as brought out of the ground in most of the fields, is a mixture of the two types. Furthermore, since crude oil is easily handled and ocean transportation cheap, much of it is refined at great distances from its sources of production. As a consequence, many refineries operate upon both types of oil rather than upon only one type.

Classification of the refineries upon a strictly geographical basis also is unsatisfactory. The free movement of oil in commerce often causes oil which is low in gasoline content to be refined in a State which produces a very high-grade oil.

The most satisfactory classification, and the one used in this study, appears to be one which is based on the types of operations performed and the proportions which different kinds of products bear to the total products. On this basis, the following five classes may be distinguished. Variation exists within the classes, but each class as a whole is different from the others and is a fairly homogeneous unit.

Class 1. Plants having little equipment, engaged in topping and skimming. All plants were included in this group which produced

¹ August, 1932, pp. 260-266: Man-Hour Productivity in the Blast-Furnace Industry in 1929; and October, 1932, pp. 818-825: Man-Hour Productivity in the Lumber Industry in the Pacific Coast States in 1929.

gasoline up to 30 per cent of the oil refined, by volume, and for which the production of lubricating oils and greases did not exceed 5 per cent, by value, of the total value of products of the refinery. In view of the fact that most crude petroleums usually contain from 24 to 26 per cent of gasoline, this class of refineries included those which "crack" ² the oil to the extent of only a few per cent of their total product.

Class 2. Plants engaged in "cracking" the oil primarily for the production of gasoline. This class included those which produced gasoline equal to 30 per cent or more of the oil refined, by volume, and for which the production of lubricating oils and greases did not exceed 5 per cent, by value, of the total value of products of the refinery. Generally, the material resulting after the gasoline had been extracted was sold as fuel oil.

Class 3. Plants whose production of lubricating oils and greases, in addition to gasoline, ranged from 5 to 39 per cent, by value, of the total value of products. In this class no limit was set on the percentage of gasoline extracted, but the results show that the percentage for this class as a whole was nearly as high as that for the second class, i. e., the cracking plants having few products other than gasoline and fuel oil. In other words, the difference between classes 2 and 3 is largely a matter of the by-products made from what remained after the oil had been cracked for the production of gasoline; on the other hand, there were a few refineries in this group which produced less than 30 per cent of gasoline, by volume. These few plants probably did no cracking for the production of gasoline.

Class 4. Plants producing lubricating oils and greases to the extent of 40 per cent or more, by value, of the total value of products. Here, also, no limit was set on the quantity of gasoline extracted, but for this class as a whole it was but little larger than that obtained from merely topping.

Class 5. Those engaged primarily in the production of asphalt and, to a certain limited extent, in liquid asphaltic road oils.

Lesser products are not named in these definitions.

Of the 390 establishments making reports to the Bureau of the Census, 117 either failed to make a satisfactory report as to the number of man-hours worked during the year or could not be classified satisfactorily because of the nature of the refinery operations. There were, therefore, 273 establishments for which the data were sufficiently complete to permit classification on the lines set forth above.

The 117 refineries which it was impracticable to classify were generally quite small, averaging only 28 wage earners³ each as compared with 207 for the entire industry and 922 for the group of largest plants. The quantity of oil refined per wage earner in these unclassified plants, 30,261 barrels, shows that most of these establishments are small topping plants.

Table 1 presents the general results of the classification, giving figures for number of establishments, wage earners, value of products, horsepower,⁴ petroleum refined, quantity of gasoline produced, per-

² I. e., break up the complex hydrocarbons, by heat and pressure, into lighter and simpler hydrocarbons.

³ The term "wage earners," as used by the Bureau of the Census, includes piece as well as time workers but does not include salaried officers or salaried employees.

⁴ The horsepower figures given in this table refer to the rated capacity of all installed equipment, since the figures on "used horsepower" were not available for the 117 unclassified plants.

centage by volume that the gasoline extracted bears to the oil refined, and average quantity of oil refined per wage earner during the year.

Examination of the table shows that the second group (those engaged largely in cracking operations for the production of gasoline) is the largest in number of establishments but that the third group is much the largest in quantity of oil refined and quantity of gasoline produced. These two groups, the second and third, are the only ones for which the gasoline-extraction ratio was more than 40 per cent by volume.

It is seen that the several classes of establishments differ materially as regards the average quantity of oil refined per wage earner during the year, the amount ranging from 58,036 barrels down to 4,930 barrels.

[TABLE 1.—OUTPUT AND HORSEPOWER OF SPECIFIED CLASSES OF ESTABLISHMENTS IN THE PETROLEUM-REFINING INDUSTRY, 1929]

Class 1 includes topping and skimming plants with gasoline production under 30 per cent by volume; class 2, cracking plants producing gasoline 30 per cent and over, by volume, and less than 5 per cent lubricants; class 3, producing 5 to 39 per cent lubricants, by value; class 4, producing 40 per cent lubricants, by value; and class 5, producing asphalt]

Class of plants	Number of establishments	Number of wage earners	Value of products	Horsepower (rated capacity) ¹	Oil refined, crude and rerun		Gasoline produced by refining ²	
					Total amount	Average per wage earner	Amount	Per cent of oil refined
Totals for each class:					<i>Barrels</i>	<i>Barrels</i>	<i>Barrels</i>	
Class 1.....	64	2,838	\$284,769,586	46,436	163,432,002	-----	40,995,087	25.08
Class 2.....	90	14,149	462,985,950	157,224	194,274,431	-----	90,800,951	46.74
Class 3.....	56	51,640	1,568,030,960	481,438	575,912,200	-----	235,603,908	40.91
Class 4.....	49	7,189	174,722,896	50,193	35,512,415	-----	10,744,599	30.26
Class 5.....	14	1,469	40,107,985	15,562	23,205,534	-----	2,121,862	9.14
Total.....	273	77,285	2,530,617,377	750,853	992,336,582	-----	380,266,407	38.32
Unclassified.....	117	3,311	109,047,624	38,996	99,134,140	-----	15,603,222	15.74
Entire industry.....	390	80,596	2,639,665,001	789,849	1,091,470,722	-----	395,869,629	36.27
Averages per establishment:								
Class 1.....	64	44	4,449,525	726	2,553,625	58,036	640,548	25.08
Class 2.....	90	157	5,144,288	1,747	2,158,605	13,749	1,008,899	46.74
Class 3.....	56	922	28,000,553	8,597	10,284,146	11,154	4,207,213	40.91
Class 4.....	49	147	3,565,773	1,024	724,743	4,930	219,278	30.26
Class 5.....	14	105	2,864,856	1,112	1,657,538	15,786	151,562	9.14
Total.....	273	283	9,269,661	2,750	3,634,933	12,844	1,392,917	38.32
Unclassified.....	117	28	932,031	333	847,300	30,261	133,361	15.74
Entire industry.....	390	207	6,768,372	2,025	2,798,643	13,520	1,015,050	36.27

¹ Rated capacity of prime movers (all installed equipment) plus that of electric motors driven by purchased electric energy.

² Not including natural gasoline produced or purchased, and blended.

Trend of Productivity

IN THE analysis that follows, only two of the five classes of plants are considered, namely Class 2 and Class 3. These are the two largest groups as measured by number of wage earners, value of product, oil refined, and gasoline produced. These two classes sufficiently represent the industry for a study of this character.

Productivity, by States

The 146 establishments in the two selected groups are classified geographically in Table 2. For the 90 cracking plants, figures are shown for four individual States and for five combinations of States; and for the 56 other establishments, figures are shown for three individual States and four combinations of States. The items shown are "throughput" (quantity of oil refined), wages, gasoline produced by refining, and horsepower.

The "throughput" item is the sum of the crude oil refined plus any partly refined oils or waxes purchased and rerun. The two latter items were usually small in comparison with the first. No information was obtained by the Census questionnaire as to the stage of refinement in which such partly refined oils were acquired. The "wages" item is based on the aggregate amount of compensation paid during the year to all wage earners of an establishment. This, divided by the year's throughput, gives the wages per barrel of oil refined; and the "wages per man-hour" are obtained by dividing the aggregate wages by the total number of man-hours worked by the wage earner. The "gasoline produced by refining" is obtained by deducting the quantity of natural gasoline purchased or produced (and blended) from the total gasoline produced and sold; furthermore in this tabulation, naphtha, benzene, tops, and other light products of distillation (but not including kerosene or illuminating oils), occasionally reported in small quantities, have all been included under the general heading of gasoline. The figure for "gasoline produced by refining," derived in this manner, is in a sense a measure of the output of the establishment.

As regards horsepower, the census questionnaire requested: (1) The aggregate horsepower of all installed equipment, classified as to prime movers and as to electric motors; and (2) the horsepower (included above) of any "inactive" prime movers (not of any electric motors). No definition of the word "inactive" was given; but, it is probable that any horsepower reported as inactive was used very little or none during the year covered by the report. Some of the manufacturers possibly failed to report as inactive certain prime movers which should have been so reported, and also possibly a number of the prime movers were used during only a portion of the year and were inactive to that extent. Taken on the whole, however, the "used" horsepower, defined as the difference between the figures for total horsepower and those for inactive horsepower, probably represents better than does the total the quantity actually used.

The States and combinations of States have been listed in Table 2 in order of their productivity per man-hour, shown in the fourth column. With the States so arranged, several trends are revealed. For the cracking plants, i. e., those engaged primarily in cracking the oil for the production of gasoline (less than 5 per cent, by value, in lubricating oils and greases), California, the State with the highest productivity (12.279 barrels of oil per man-hour), paid the highest average hourly wage, 82.7 cents, but had the lowest wage cost, 6.7 cents per barrel of oil refined. On the other hand, the 2-State group of Arkansas and Louisiana showed a productivity of only 2.737 barrels per man-hour and paid 22.3 cents as wages for each barrel of oil refined, the highest labor cost shown in the table. These differences in productivity and wages are accompanied by a striking range in the

figures for horsepower per wage earner. As is shown in the last column of the table, California, with the highest rate of productivity and lowest unit labor cost, reported 32.58 used horsepower for each wage earner employed, whereas Arkansas and Louisiana, with the lowest productivity and highest unit labor cost, reported only 4.27 used horsepower per wage earner, the lowest shown in the table.

The same general situation is shown by the figures in the section covering the 56 plants producing lubricating oils and greases (in addition to gasoline). California, with the highest productivity, of 8.767 barrels per man-hour, had the lowest average unit labor cost, 9.0 cents per barrel refined, whereas the 5-State combination of Illinois, Indiana, Kentucky, Ohio, and West Virginia showed the lowest productivity of 3.400 barrels per man-hour and the highest labor cost of 18.6 cents per barrel. The sharpness of this contrast is undoubtedly reduced, but not destroyed, by differences in the percentages of gasoline extracted from the oil, for in California only 28.9 per cent of the oil was extracted as gasoline, while in the 5-State combination mentioned the extraction ratio was 53.6 per cent.

Brief comment on the data regarding gasoline produced, given in the eighth column of the table, may also be made. It is seen that among the 90 cracking plants, those in California produced the most gasoline per man-hour (4.654 barrels), whereas those in Arkansas and Louisiana produced the least (1.226 barrels). The former figure is 3.8 times the latter. No explanation of this large range in production is afforded by a comparison of the types of oil refined in these two districts. Much if not all of the oil produced in California has an asphalt base, but this is also true of that produced in the portion of Louisiana near the Gulf Coast; much of the other oil produced in Arkansas and Louisiana is a mixture of asphalt and paraffin-base oils.

The table indicates (columns 3 and 4) that man-hour productivity does not increase with size of plant as measured by the quantity of oil refined per establishment. Thus in the 90-plant group, California ranks first in average throughput (11,019,447 barrels) per establishment as well as in man-hour productivity, Arkansas and Louisiana rank third in average throughput (2,322,750 barrels) per establishment but last in man-hour productivity. In like manner, Oklahoma, ranking second in productivity, ranks eighth in average throughput per establishment.

TABLE 2.—AVERAGE THROUGHPUT, WAGES, GASOLINE PRODUCED, AND HORSE-POWER IN 146 SELECTED PETROLEUM REFINERIES, BY STATES, 1929

[Groups of States cover the following number of plants: (1) Cracking plants—New Mexico 2, Colorado 2, Wyoming 7, and Montana 4; Massachusetts 2, Maryland 1, South Carolina 1, and Georgia 1; Missouri 1, Kentucky 5, Illinois 2, Indiana 2, and Michigan 1; Ohio 3, Pennsylvania 1, and West Virginia 1; Arkansas 3 and Louisiana 2. (2) Other plants—Kansas 2, Utah 1, and Wyoming 1; Maryland 1, New Jersey 4, New York 2, and Rhode Island 1; Louisiana 2, and Texas 7; Illinois 4, Indiana 2, Kentucky 1, Ohio 4, and West Virginia 1]

CLASS 2.—90 cracking plants producing gasoline largely

State	Number of establishments	Average number of wage earners	Average throughput (barrels of oil refined)			Wages (in cents)		Gasoline produced by refining ¹		Average used horsepower ²		
			Per establishment	Per man-hour	Per wage earner	Per barrel refined	Per man-hour	Barrels per man-hour	Per cent of oil refined	Per establishment	Per 10,000 barrels of oil refined	Per wage earner
California.....	3	357	11,019,447	12,279	30,867	6.7	82.7	4.654	37.9	11,631	10.55	32.58
Oklahoma.....	19	72	1,386,193	6.962	19,253	8.0	55.7	3.584	51.5	567	4.09	7.88
New Mexico, Colorado, Wyoming, and Montana.....	15	85	1,049,047	4.854	12,342	15.1	73.3	2.794	57.6	880	8.38	10.35
Kansas.....	11	168	2,153,784	4.796	12,820	11.7	56.3	2.738	57.1	1,250	5.80	7.44
Texas.....	16	158	1,916,678	4.642	12,131	12.4	57.4	1.951	42.0	1,210	6.31	7.66
Massachusetts, Maryland, South Carolina, and Georgia.....	5	327	4,110,645	4.608	12,571	13.2	60.9	1.688	36.6	2,964	7.21	9.06
Missouri, Kentucky, Illinois, Indiana, and Michigan.....	11	187	2,286,189	4.285	12,225	13.7	58.7	2.221	51.8	1,642	7.18	8.78
Ohio, Pennsylvania, and West Virginia.....	5	138	1,493,839	3.742	10,825	14.0	52.3	1.746	46.7	1,175	7.87	8.51
Arkansas and Louisiana.....	5	335	2,322,750	2.737	6,934	22.3	61.0	1.226	44.8	1,432	6.17	4.27
Total.....	90	157	2,158,605	5.136	13,749	11.9	61.0	2.401	46.7	1,532	7.10	9.76

CLASS 3.—56 plants producing lubricating oils and greases (as well as gasoline)

California.....	6	884	19,595,326	8.767	22,167	9.0	78.8	2.536	28.9	11,332	5.78	12.82
Kansas, Utah, and Wyoming.....	4	410	5,417,871	5.249	13,214	12.7	66.6	2.146	40.9	4,087	7.54	9.97
Maryland, New Jersey, New York, and Rhode Island.....	8	984	10,417,164	4.330	10,587	18.5	80.3	1.873	43.3	8,067	7.74	8.20
Oklahoma.....	8	351	4,300,960	4.316	12,253	12.6	54.2	2.142	49.6	4,021	9.35	11.46
Louisiana and Texas.....	9	2,132	20,349,762	3.493	9,545	15.3	53.4	1.398	40.0	15,790	7.76	7.41
Pennsylvania.....	9	573	5,465,913	3.456	9,539	16.6	57.5	1.394	29.6	4,979	9.11	8.69
Illinois, Indiana, Kentucky, Ohio, and West Virginia.....	12	806	7,215,224	3.400	8,952	18.6	63.2	1.824	53.6	5,257	7.29	6.52
Total.....	56	922	10,284,146	4.207	11,154	14.8	62.3	1.721	40.9	7,697	7.48	8.35

¹ Not including natural gasoline produced or purchased, and blended.

² Rated capacity of prime movers, plus that of electric motors driven by purchased energy; does not include equipment reported inactive.

Productivity, by Size of Plant

Table 3 analyzes the plants in each of the two groups according to variations in (1) the number of wage earners employed, (2) the total throughput, (3) oil refined per man-hour, (4) wages per man-hour, (5) used horsepower (not including equipment reported inactive), (6) used horsepower per wage earner, and (7) percentage of gasoline extracted relative to the oil refined.

TABLE 3.—AVERAGE THROUGHPUT, WAGES, GASOLINE PRODUCED, AND HORSE-POWER IN 146 SELECTED PETROLEUM REFINERIES, CLASSIFIED ACCORDING TO SIZE, 1929

CLASS 2.—90 cracking plants producing gasoline largely

Size classification	Number of establishments	Average number of wage earners	Average throughput (barrels of oil refined)			Wages		Gasoline produced per man-hour ¹	Average used horsepower ²		
			Per establishment	Per man-hour	Per wage earner	Per barrel refined	Per man-hour		Per establishment	Per 10,000 barrels of oil refined	Per wage earner
Number of wage earners employed:						Cts.	Cts.	Bbls.			
Under 50.....	24	24	414, 567	5.855	17, 274	9.6	56.2	2.959	199	4.80	8.29
50 to 99.....	28	67	1, 075, 301	5.809	16, 049	9.4	54.8	2.863	521	4.85	7.78
100 to 199.....	16	145	1, 990, 057	5.037	13, 725	11.6	58.2	2.481	1, 436	7.22	9.90
200 and over.....	22	427	5, 562, 522	4.970	13, 027	12.7	63.4	2.244	4, 343	7.81	10.17
Throughput (barrels of oil refined):											
Under 500,000.....	17	19	280, 432	4.963	14, 760	11.1	56.2	2.536	140	4.99	7.37
500,000 to 999,999.....	22	57	755, 245	4.904	13, 250	11.5	56.2	2.426	441	5.84	7.74
1,000,000 to 2,499,999.....	30	122	1, 527, 645	4.636	11, 573	12.4	67.7	2.447	1, 158	7.58	9.49
2,500,000 and over.....	21	425	6, 050, 589	5.385	14, 237	11.8	63.3	2.372	4, 337	7.17	10.20
Productivity (barrels of oil refined) per man-hour:											
Under 4.000.....	24	212	1, 532, 994	2.792	7, 231	20.6	57.4	1.367	1, 306	8.52	6.16
4.000 to 4.999.....	23	182	2, 258, 616	4.454	12, 410	13.6	60.4	2.122	1, 595	7.06	8.76
5.000 to 5.999.....	13	158	2, 378, 908	5.679	15, 056	11.2	63.5	2.745	1, 301	5.47	8.23
6.000 and over.....	30	94	2, 486, 953	9.892	26, 457	6.7	66.4	4.389	1, 769	7.11	18.82
Wages per man-hour:											
Under 50.0 cents.....	16	105	1, 347, 821	4.203	12, 836	10.5	44.3	1.936	594	4.41	5.66
50.0 to 59.9 cents.....	39	133	1, 767, 256	4.810	13, 288	11.7	56.4	2.272	1, 052	5.95	7.91
60.0 to 69.9 cents.....	20	226	2, 504, 162	4.442	11, 080	14.3	63.7	2.244	1, 636	6.53	7.24
70.0 cents and over.....	15	184	3, 580, 208	7.572	19, 458	10.3	76.0	3.245	3, 643	10.18	19.80
Used horsepower: ²											
Under 250.....	29	41	617, 924	5.582	15, 071	9.9	55.4	2.802	116	1.88	2.83
250 to 999.....	24	70	1, 169, 138	5.678	16, 702	9.4	53.5	2.754	511	4.37	7.30
1,000 and over.....	37	305	4, 007, 982	4.997	13, 141	12.6	62.9	2.298	3, 304	8.24	10.83
Used horsepower ² per wage earner:											
Under 5.00.....	37	139	1, 363, 705	3.824	9, 811	14.9	57.1	1.694	431	3.16	3.10
5.00 to 9.99.....	27	204	2, 788, 783	4.854	13, 671	12.4	60.4	2.328	1, 615	5.79	7.92
10.00 and over.....	26	134	2, 635, 392	7.510	19, 667	9.0	67.6	3.545	3, 013	11.43	22.49
Ratio of gasoline extraction (per cent of oil refined):											
Under 40.0.....	24	148	2, 044, 822	5.234	13, 816	11.4	59.7	1.692	1, 310	6.41	8.85
40.0 to 59.9.....	45	174	2, 424, 877	5.129	13, 936	11.9	60.8	2.412	1, 638	6.75	9.41
60.0 and over.....	21	132	1, 718, 059	5.029	13, 016	12.6	63.2	3.293	1, 559	9.07	11.81

CLASS 3.—56 plants producing lubricating oils and greases (as well as gasoline)

Number of wage earners employed:											
Under 200.....	12	92	1, 133, 008	4.521	12, 315	11.9	53.9	2.160	982	8.67	10.67
200 to 999.....	30	544	7, 376, 137	5.147	13, 559	12.4	63.9	1.939	5, 841	7.92	10.74
1,000 and over.....	14	2, 443	24, 359, 428	3.752	9, 971	16.5	61.9	1.603	17, 431	7.16	7.14
Throughput (barrels of oil refined):											
Under 2,500,000.....	14	135	1, 023, 976	2.922	7, 585	20.8	60.7	1.343	1, 315	12.84	9.74
2,500,000 to 9,999,999.....	22	547	5, 142, 460	3.542	9, 401	16.7	59.1	1.647	4, 797	9.33	8.77
10,000,000 and over.....	20	1, 885	22, 422, 120	4.482	11, 895	14.2	63.5	1.763	15, 355	6.85	8.15
Productivity (barrels of oil refined) per man-hour:											
Under 3.000.....	15	742	4, 583, 522	2.446	6, 177	24.7	60.4	1.180	4, 543	9.91	6.12
3.000 to 3.999.....	16	1, 303	12, 896, 651	3.515	9, 898	16.2	56.8	1.552	11, 024	8.55	8.46
4.000 to 4.999.....	12	777	9, 016, 015	4.521	11, 604	15.7	70.9	2.082	5, 681	6.30	7.31
5.000 to 5.999.....	6	1, 059	13, 901, 477	5.194	13, 127	12.4	64.3	1.868	7, 670	5.52	7.24
6.000 and over.....	7	571	15, 601, 728	10.814	27, 324	7.1	76.3	3.117	10, 333	6.62	18.10
Wages per man-hour:											
Under 50.0 cents.....	8	780	8, 285, 090	3.725	10, 622	11.3	42.2	1.349	8, 861	10.70	11.36
50.0 to 59.9 cents.....	17	769	7, 704, 155	3.726	10, 018	14.4	53.8	1.622	4, 959	6.44	6.45
60.0 to 69.9 cents.....	18	952	8, 782, 277	3.419	9, 225	18.4	63.0	1.508	7, 782	8.86	8.17
70.0 cents and over.....	13	1, 169	16, 967, 681	5.848	14, 515	13.5	79.0	2.250	10, 445	6.16	8.93

¹ Not including natural gasoline produced or purchased, and blended.² Rated capacity of prime movers, plus that of electric motors driven by purchased energy; does not include equipment reported inactive.

TABLE 3.—AVERAGE THROUGHPUT, WAGES, GASOLINE PRODUCED, AND HORSE-POWER IN 146 SELECTED PETROLEUM REFINERIES, CLASSIFIED ACCORDING TO SIZE, 1929—Continued

CLASS 3.—56 plants producing lubricating oils and greases (as well as gasoline)—Continued

Size classification	Number of establishments	Average number of wage earners	Average throughput (barrels of oil refined)			Wages		Gasoline produced per man-hour	Average used horsepower		
			Per establishment	Per man-hour	Per wage earner	Per barrel refined	Per man-hour		Per establishment	Per 10,000 barrels of oil refined	Per wage earner
Used horsepower: ²						Cts.	Cts.	Bbls.			
Under 1,000.....	8	66	574,821	3.146	8,709	16.7	52.5	1.331	335	5.83	5.08
1,000 to 2,499.....	11	278	2,557,260	3.459	9,199	16.8	58.0	1.850	1,847	7.22	6.64
2,500 to 4,999.....	11	509	4,844,029	3.613	9,517	16.6	60.0	1.656	3,909	8.06	7.68
5,000 and over.....	26	1,633	18,842,287	4.352	11,538	14.5	63.1	1.725	14,041	7.45	8.60
Used horsepower ² per wage earner:											
Under 5.00.....	11	745	5,697,360	3.022	7,648	19.5	58.8	1.294	2,302	4.04	3.09
5.00 to 9.99.....	26	1,141	11,659,093	3.815	10,218	16.8	64.2	1.751	8,276	7.10	7.25
10.00 to 19.99.....	14	851	11,639,503	5.087	13,677	11.4	58.2	1.776	10,390	8.93	12.22
20.00 and over.....	5	370	9,430,356	10.084	25,487	7.5	75.4	2.732	9,018	9.56	24.37
Ratio of gasoline extraction (per cent of oil refined):											
Under 30.0.....	11	507	9,132,611	6.908	18,013	10.6	73.2	1.723	6,526	7.15	12.87
30.0 to 39.9.....	14	1,575	17,654,139	4.226	11,209	13.7	58.1	1.506	12,594	7.13	8.00
40.0 to 59.9.....	24	763	7,694,781	3.740	10,085	16.6	62.2	1.903	6,273	8.15	8.22
60.0 and over.....	7	814	6,231,541	3.009	7,655	22.9	69.0	1.969	4,630	7.43	5.69

² Rated capacity of prime movers, plus that of electric motors driven by purchased energy; does not include equipment reported inactive.

Number of wage earners employed.—Classifying the 90 largely gasoline-producing plants on the basis of number of wage earners employed, it is seen that the average throughput per establishment ranged from 414,567 barrels in the 24 establishments with fewer than 50 wage earners (actually averaging 24 wage earners each) to 5,562,522 barrels in the 22 refineries with 200 wage earners or more (averaging 427 wage earners each). It is to be noted that the figures for wages and horsepower per establishment increase with the increase in number of wage earners employed, while those for throughput per man-hour and throughput per wage earner decrease with the increase in number of wage earners employed. In other words, wage costs, both per man-hour and per barrel of oil refined, increase as the number of wage earners increases, while at the same time productivity per man-hour and per wage earner decreases. This is accompanied by a small increase in horsepower per wage earner.

A similar situation is shown by the figures in the second half of the table, covering the 56 plants producing largely lubricating oils and greases, except that for these plants the horsepower per wage earner decreases slightly instead of increasing slightly as for the first group of plants.

Quantity of oil refined.—The second classification, on the basis of quantity of oil refined, shows results for the 90 cracking plants, very similar to those shown by the classification on the basis of number of wage earners employed. There are, however, two points of difference: (1) The productivity per man-hour does not change appreciably in the case of the classification based on throughput (the average productivity for the two largest classes is about the same as that for the two smallest classes); and (2) the average wage cost per barrel of oil

refined is practically constant. This suggests that the productivity and unit wage costs of these plants are practically unaffected by size of plant as measured by total quantity of oil refined during the year.

In the case of the 56 plants producing lubricating oils and greases, there is a considerable increase in man-hour productivity with the increase in throughput; also a lower unit wage cost per barrel of oil refined.

Oil refined per man-hour.—The third sections of the table, in which the two groups of plants are classified according to the amount of oil refined per man-hour, suggest several points of interest for both groups. One point is that the plants with highest individual productivity had much the lowest unit wage cost per barrel of oil refined, and this large increase in productivity at reduced unit wage cost was accompanied by a very large increase in horsepower per wage earner. For the gasoline-producing plants, the average productivity of those refining less than 4 barrels per man-hour was 2.792 barrels, at an average wage cost of 20.6 cents per barrel, whereas for those refining 6 or more barrels per man-hour the average productivity was 9.892 barrels at an average wage cost of only 6.7 cents per barrel. In other words, the productivity of the latter was 3.5 times that of the former, but the wage cost was less than one-third that of the former, and the horsepower per wage earner 3.1 times as great.

Wages per man-hour.—From the fourth sections of the table, classifying the establishments according to the average wage cost per man-hour, it appears, for the group of 90 gasoline-producing plants, that although there is a considerable range in the average hourly wage rate and in the productivity, the relative increases in the two are about the same, that for productivity but slightly in excess of that for wage cost. For the 16 gasoline-producing refineries paying under 50.0 cents per hour, the average wage cost was 44.3 cents per hour and the productivity was 4.203 barrels refined per man-hour, while for the 15 refineries paying 70.0 cents and over per hour the average wage cost was 76.0 cents per man-hour and the productivity was 7.572 barrels per man-hour. The figures for the latter group of plants were larger than those for the former by 72 per cent in average wages and 80 per cent in productivity; and the horsepower per wage earner was three and one-half times as great.

A somewhat different situation is presented by the figures for the second group of plants, those producing lubricating oils and greases (as well as gasoline). Although there is an increase in productivity along with wages, the former increased only 87 per cent while the latter increased 37 per cent; and the horsepower per wage earner actually decreased 21 per cent, from 11.36 to 8.93 horsepower.

Used horsepower per wage earner.—The sixth sections of the table show the establishments classified according to used horsepower per wage earner. These sections emphasize again that the increase in the horsepower per wage earner is accompanied by greatly increased productivity and greatly reduced wage cost per barrel of oil refined, even though there is a material increase in the average hourly wage rate. Note, for instance, the group of 56 plants in the second half of the table. For the refineries having less than 5 horsepower per wage earner, the productivity was 3.022 barrels per man-hour and the wage cost was 19.5 cents per barrel, whereas for those plants with more than 20 horsepower per wage earner the productivity was 10.084 barrels

refined per hour at a wage cost of only 7.5 cents per barrel. The corresponding average hourly wage rates were 58.8 and 75.4 cents; and the figures for horsepower per wage earner were 3.09 and 24.37. In other words, while the horsepower per wage earner was nearly eight times as great, productivity was only 3.3 times as great; and the wage cost per barrel of oil refined decreased 62 per cent, though the average hourly wage rates increased 28 per cent.

Ratio of gasoline extraction.—The remaining sections of Table 3 show the operating results obtained when the establishments are classified according to the percentage of gasoline extracted from the oil refined. As is to be expected, those with the highest percentage of extraction, 60 per cent and over, show less throughput per man-hour than those obtaining a low percentage of extraction; the difference is small for the gasoline-producing plants, but quite large for those producing lubricating oils and greases. For this latter group the productivity of the plants with high percentage of extraction was 3.009 barrels per man-hour, whereas for the low-extraction plants it was 6.908, considerably over twice as much. This higher productivity was accompanied by considerably larger horsepower per wage earner.

In all of the above comment, all reference to large and small plants must be understood as referring to the largest and the smallest of the plants in each of the two major groups covered by the study. These are the ones shown by the second and third groups of plants in Table 1. Plants in the first group and the unclassified group of that table are, on the average, smaller than the smallest in the second group; and the largest of the second group are of about the same size as the smallest of the third.

INSURANCE AND PENSION PLANS

Social Insurance in Denmark ¹

MOST of the social-welfare measures in Denmark providing for benefits for such contingencies as sickness, invalidity, unemployment, etc., grew out of voluntary mutual-benefit associations formed by the people. As gradually the principle of State assistance was introduced a degree of State supervision was also inaugurated, but in most instances the primary administration of the system remained in the hands of the local association.

The Danish working class at present receives the benefit of systems of sick benefits, invalidity pensions, old-age pensions, unemployment benefits, and compensation for industrial accidents.

Types of Social Insurance

*Unemployment insurance.*²—Unemployment insurance in Denmark covers only trade-unionists; but since practically all urban workers are organized, in reality the only portion of the working class not included is that represented by the unorganized rural workers. There are at present about 300,000 workers who are covered by the system.

The system is generally administered by trade-union officials under the supervision of the Government. Although the employers, the municipalities, and the central Government all contribute toward the cost of the insurance, by far the largest proportion is paid by the workers themselves.

The contributions of the State vary from 40 per cent of the membership fees for workers whose average yearly earnings are 1,500 kroner (\$402)³ or less, to 10 per cent for those whose earnings are over 4,000 kroner (\$1,072); the contributions of the municipalities vary from 30 to 5 per cent for the same wage classes. The remainder of the cost of the benefits is paid by the members, their contributions being set by the individual fund. In the trades with the highest earnings the members bear the cost of about 87 per cent and in the trades with the lowest earnings about 59 per cent of the benefits disbursed.

Benefits for unemployment may not exceed two-thirds of the average daily earnings, nor 4 kroner (\$1.07) per day for heads of families and 3 kroner (80.4 cents) for single persons. The length of time during which benefits may be paid varies according to the by-laws of the different funds; the shortest period is 70 days, the longest period is about 120 days, and the average about 100 days, in 12 consecutive months.

An attempt was made in 1922 and 1923 to build up a central fund for relieving the distress attendant upon unemployment among unorganized as well as organized workers. Funds were to be raised

¹ Data are from report by E. Gjessing, American vice consul at Copenhagen, dated June 25, 1932, and Denmark, Commissioner of Recognized Sickness Funds, The national sickness, invalidity and funeral insurance in Denmark, [Copenhagen?] 1932.

² For detailed account of this system see Bul. No. 544 of this bureau (pp. 214-226).

³ Conversions into United States currency on basis of krone=26.8 cents.

mainly by contributions from employers, though the State and the unemployment funds were also to contribute. The scheme was never carried through as planned, and the central fund has been used only to maintain emergency funds and training schools for unemployed. The current depression, however, has revived the idea and it is expected that the present contributions of the employers—3 kroner (80.4 cents) for each industrial worker employed, and 2 kroner (53.6 cents) for each rural worker—will be raised materially.

Sickness insurance.—The sickness-insurance system in Denmark is an outgrowth of a voluntary system of sick-benefit societies. Nearly all the workers and their families are members of a sick-benefit organization. In 1931 these societies had 1,689,142 members. The number of members represents about two-thirds of the adult population, but the number of persons actually insured is considerably larger, owing to the fact that the members' children under the age of 15 are also automatically covered by virtue of their parents' membership.

The law of July 14, 1927, provided for the extension by the State of financial assistance to societies (1) functioning either for certain trades or occupations or for a certain district, (2) having a membership of at least 200, and (3) admitting to membership only persons of limited means. The maximum annual income qualification is at present set at 4,200 kroner (\$1,126) for the Copenhagen district, 3,800 kroner (\$1,018) for other places with a population of over 2,000, 3,400 kroner (\$911) for places of from 1,000 to 2,000 population, and 2,800 kroner (\$750) in all other places; these limits are increased 300 kroner (\$80) for each dependent child under 15 years. The property limit is set at 9,500 kroner (\$2,546) for single persons and 14,000 kroner (\$3,752) for heads of families.

The State grants to each recognized society an annual subsidy amounting to 2 kroner (53.6 cents) per member, plus one-fourth of the expenditure for medical care, hospital service, and sick benefits. Ordinarily the State's contribution toward the cost of medical assistance must not exceed 2,400,000 kroner (\$643,200) per year, but this may be increased if conditions justify. In addition a special subsidy (half of which is borne by the municipality) is given to meet extraordinary expenses incurred for the treatment of members suffering from chronic diseases. The principal assistance given by the municipalities is that members of sick-benefit societies are accepted for treatment at local hospitals at half price; this is compulsory under the law.

The members' contributions are set at an amount which, together with the State and municipal contributions, will cover the entire expenses of the society.

The benefits which under the law must be extended by the societies include medical and hospital care and cash benefits designed to compensate for loss of earnings during the period of illness. The latter benefits may not be less than 40 öre (10.7 cents) per day nor exceed four-fifths of the average daily earnings, or 6 kroner (\$1.61) per day, whichever is less.

There is a waiting period of three days before sick benefits become payable. They are then payable for not to exceed 13 consecutive weeks or 26 weeks during any one year. All right to benefit ceases after receipt of 60 weeks' benefits in 3 consecutive years.

The societies may also pay funeral benefits and render other optional services such as treatment by specialists, dental treatment, provision of medicines, home nursery, artificial appliances, etc.

Medical care is extended through one or more physicians engaged by the society at a stipulated rate. These physicians are chosen by the members at the beginning of each calendar year.

The administration of the societies is under the general supervision of the State health insurance bureau, the director of which is appointed by the Ministry for Home Affairs. Representatives of the sick-benefit societies meet annually with the director of the State bureau to discuss matters of interest. Every fourth year this meeting elects 11 persons who, under the chairmanship of the director of the bureau, form a committee to make rules for the administration of the sickness insurance system and decide disputes.

Invalidity insurance.—Members of sick-benefit societies who, after two years' membership, become disabled from any cause other than an industrial accident are entitled, under the law of July 16, 1927, to an invalidity pension. In order to qualify for this pension the disability must be such as to cause a reduction of working capacity of at least 66% per cent, and must not have been caused by the fault of the applicant nor through the use of alcoholic beverages or narcotics. The pension is payable only to persons between the ages of 18 and 62; after the latter age the applicant is taken care of under the general old-age pension system.

Funds for the payment of invalidity pensions are derived from (1) contributions from the insured ranging from 4.44 kroner (\$1.19) per annum for persons between 18 and 25 years at time of entrance to 6.84 kroner (\$1.83) per annum for those between 33 and 40 years of age at entrance;⁴ (2) contributions from employers at the rate of 4.50 kroner (\$1.21) for each 300 man-days of labor performed for them during the year; and (3) contributions from the State and municipalities sufficient to cover any part of the expense not met by (1) and (2), the State paying three-fifths of the amount necessary and the municipality two-fifths.

Persons who lose their membership in a sick-benefit society, because of inheritance or other increase in income above the limit set, may retain their right to invalidity pension upon continuing their contributions at three times the lowest rate of premium (i. e., 3 times 4.44 kroner, or 13.32 kroner, per annum).

The usual amount of the invalidity pension is 540 kroner (\$144.72) per year, but in exceptional cases, as, for instance, total blindness, it may be increased by 260 kroner (\$69.68) a year paid by the municipality. If the pensioner is also receiving benefits under the workmen's compensation law, or another annuity, greater in amount than the invalidity pension to which he would normally be entitled, his invalidity pension is reduced by two-thirds; if the other annuity or benefit is smaller than the invalidity pension, the latter is reduced to one-third of the normal amount, plus the difference between the other benefit and the pension.

Invalidity pensions are paid through the local sick-benefit society of which the pensioner is a member. They cease if the pensioner regains more than a third of his ordinary working capacity. If by medical treatment, artificial appliances, training, etc. the working capacity may be restored, he is required to undergo such training or treatment on pain of loss of the pension.

⁴ Persons over 40, if admitted, make contributions at a rate fixed by the Ministry for Home Affairs.

The State invalidity bureau, which is a subdivision of the State health insurance bureau, administers the system.

Compensation for industrial accidents.—The workmen's compensation law provides for compensation for injury resulting from either accident or unhealthful conditions.

Insurance is compulsory upon all employers of labor, the insurance being written by private insurance companies, which, however, must meet the requirements laid down by the State workmen's insurance bureau as to financial safety, profits, etc. Self-insurance may be permitted upon proof of ability to meet the losses. In case of bankruptcy, compensation benefits are a preferred claim.

Benefits begin only after the beginning of the fourteenth week of incapacity (during the first 13 weeks the injured receives benefits from his sick-benefit society). They are limited in amount to two-thirds of the average earnings (averaged over the past year, but not exceeding 2,100 kroner), minus 15 per cent, and must not be less than 1.00 krone (26.8 cents) or more than 5.25 kroner (\$1.41) per day. Compensation continues at this rate until death or until the degree of disability is definitely determined by the State workmen's insurance bureau. After the extent of disablement is ascertained the injury is compensated for by a lump-sum award varying according to the degree of disability, the amount of the award being based upon the average yearly earnings. These lump sums are calculated as shown below, but are in all cases subject to a deduction of 15 per cent.

Disability of—	Per cent of annual earnings
5-15 per cent.....	5×100
16-35 per cent.....	5×15 plus 8×85 6×30
36-60 per cent.....	plus 10×70 8×60
61-90 per cent.....	plus 12×40 8×60
91-100 per cent.....	plus 12×30 plus 16×10

Thus, under the above scale, in the case of a worker whose annual earnings averaged 1,500 kroner (\$402) and who sustained an injury causing disability of, say, 65 per cent, the compensation would be calculated as follows: 60 per cent of 1,500 kroner (or 900 kroner) times 8, plus 40 per cent of 1,500 kroner (or 600 kroner) times 12, or 14,400; as the compensation is subject to a 15 per cent deduction, the lump-sum award which he would receive would be 12,240 kroner (\$3,280).

If the injured person is receiving from the State any pension or other benefit, the amount of the compensation award is reduced by the amount of the other benefit.

In case of death, benefits are provided for the dependents of the deceased.

*Old-age pensions.*⁵—There is also a general, noncontributory system of old-age pensions, payable at 65 years of age, to Danish citizens

⁵ For a detailed account of this system see Bul. No. 561 of this bureau (pp. 180-184).

with 5 years' residence in the Kingdom, whose income does not exceed 300 kroner (\$53.60) a year in the case of married couples and 100 kroner (\$26.80) in the case of single persons.

The amount of the pension depends upon the age of the pensioner, his marital status, his place of residence, etc. The maximum payable varies, according to these factors, from 378 to 1,296 kroner (\$101 to \$347) per year.

The system is administered by the local authorities under the general supervision of the Ministry for Home Affairs.

Public Relief

THERE are certain types of needy cases which can not be aided under any of the types of insurance described above. Thus, it is evident that under the present unemployment insurance law, relief can not be extended in all cases of unemployment, since relief can not be given to unorganized laborers, nor to organized laborers who have been out of employment for the maximum period permitted under the law. Also, there is a comparatively large number of people of the poor or working class who are barred from relief under the other laws mentioned above. They may, for instance, not have become members of a sick-benefit society; they may have joined such a society but have become invalids before the expiration of the two years' membership required for eligibility to invalidity pension; or they may have met with an accident outside their place of work, in which case they are not entitled to workmen's compensation. For all these classes of people, who are not vagrants or paupers and who have endeavored to make a living for themselves, relief of a temporary nature can be provided out of the "funds for the relief of temporary need"—local funds raised through general taxation. Relief can be obtained through personal application. If the applicant is found worthy it will be granted and this relief is not considered as poor relief.

Administrative Procedure

AS ALREADY stated, the framework and administrative machinery of the voluntary association formed originally for mutual protection in case of unemployment, sickness, invalidity, etc., were retained after the inauguration of government aid and control. Practically no changes have been made in the administrative machinery for many decades. It operates smoothly in the hands of locally elected men all over the country, under supervision by the central government bureaus. In spite of the complicated accounting, the extremely large number of beneficiaries, and the numerous investigations involved, the administrative expenses seldom exceed 6 per cent of the funds handled. In the case of workmen's compensation, in which the funds are handled to a large extent by private insurance companies, the Government has introduced a searching supervision with a view to curtailing profits over $6\frac{1}{2}$ per cent.

The local sick-benefit societies collect from their members the contributions for sickness and invalidity, keeping separate the amounts so collected and maintaining a strict accounting of the money in the two funds. Out of these funds they pay the benefits and defray the other costs authorized under the two laws. If current expenditure exceeds the income, the societies draw on the funds administered by the two State bureaus. The State contributions for benefits go to the

State health insurance bureau, which apportions the amount among the local societies. The State and municipal contributions for invalidity pensions go direct to the State invalidity bureau, but the employers' contributions are remitted to that bureau through the insurance companies which carry the workmen's compensation insurance. Two State auditors supervise the accounts of the two central bureaus and these again supervise the accounts of the local societies.

The cost of administration of the sick-benefit societies is covered by a small percentage of the fees paid by the members for the sickness and invalidity insurance. The insurance companies that receive employers' contributions for invalidity pensions are permitted to retain 2 per cent for their services in handling these funds.

Under the workmen's compensation law all the payments except the lump-sum awards are made directly by the insurance companies to the beneficiaries. The lump-sum awards, however, are paid to the State workmen's insurance bureau, which is given wide authority in the disbursing of these sums in such a way as to safeguard the interests of beneficiaries and their dependents, and to prevent the squandering of comparatively large amounts by beneficiaries who have had no or little experience in handling money.

In general it may be said that the cost of administration of the different funds is very low and there have never been complaints of extravagance or undue expenditures on the part of officials of the societies or bureaus.

Expenditures for Social Insurance

The following table shows the approximate amounts of contribution under the various laws:

APPROXIMATE AMOUNT OF CONTRIBUTIONS FOR SPECIFIED TYPES OF SOCIAL INSURANCE IN DENMARK, 1929 TO 1931

Type of insurance, and class of contributors	Amount contributed in—					
	1929		1930		1931	
	Danish currency	United States currency	Danish currency	United States currency	Danish currency	United States currency
Unemployment:	<i>Kroner</i>		<i>Kroner</i>		<i>Kroner</i>	
State and municipalities	10,500,000	\$2,814,000	10,500,000	\$2,814,000	9,600,000	\$2,573,000
Employers	1,000,000	268,000	1,000,000	268,000	1,000,000	268,000
Workers	19,500,000	5,226,000	19,000,000	5,092,000	17,500,000	4,690,000
Total	31,000,000	8,308,000	30,500,000	8,174,000	28,100,000	7,531,000
Sickness:						
State and municipalities	11,000,000	2,948,000	10,700,000	2,868,000	11,100,000	2,975,000
Members of societies ¹	32,300,000	8,656,000	35,200,000	9,433,000	36,600,000	9,809,000
Total	43,300,000	11,604,000	45,900,000	12,301,000	47,700,000	12,784,000
Invalidity:						
State and municipalities	5,600,000	1,501,000	5,600,000	1,501,000	5,500,000	1,474,000
Employers	3,700,000	992,000	3,700,000	992,000	3,800,000	1,018,000
Insured	6,300,000	1,688,000	6,200,000	1,661,000	6,400,000	1,715,000
Total	15,600,000	4,181,000	15,500,000	4,154,000	15,700,000	4,207,000
Industrial accidents: Employers' premiums	6,200,000	1,662,000	6,300,000	1,688,000	6,500,000	1,742,000
Old age:						
Municipalities	25,000,000	6,700,000	(²)	(²)	(²)	(²)
State	34,400,000	9,219,000	(²)	(²)	(²)	(²)
Total	59,400,000	15,919,000	(²)	(²)	(²)	(²)
Public relief: State and municipalities	17,000,000	4,556,000	5,000,000	4,020,000	18,000,000	4,824,000

¹ Amounts include also some income from other sources.

² No data.

Supplementary Unemployment Insurance and Pension Schemes in English Industry

EVEN before the recent reduction in the unemployment benefits paid under the plan of the English Government, there was complaint that the benefits were insufficient, especially in the case of skilled workers, and a number of schemes had been inaugurated in different industries to supplement the public provision. (See *Monthly Labor Review*, February, 1930, p. 40; May, 1930, p. 36.) More recently several plans have been adopted which include pensions on retirement, as well as benefits in case of illness, accident, and unemployment. Two of these, described in some detail in communications from the United States consuls stationed in Great Britain, are summarized below.

Wool Textile Industry¹

IN THE latter part of 1931 an organization known as the "Textile Friendly Society" was initiated by some of the employers in the wool textile industry, in order to make better provision for their employees in case of interference with their earning capacity or of death. The society is open to all firms in the industry, but on the operatives' side membership is at present restricted to the male key employees, including foremen, superintendents, tuners, twistors, warp dressers, packers, warehousemen, other skilled workers, and the office force, these classes being estimated to include at least 20 per cent of the male workers of the industry. At the date of the report, the plan was in operation in the mills of five Yorkshire manufacturing concerns, about 500 firms in the industry had been circularized regarding membership, and promises of support had been received from some, while others had it under consideration.

The plan is on a contributory basis, each worker paying a monthly sum on his own account, and the employer paying a stated sum monthly for each of his employees who is a member. Contributions depend upon the age at which an employee enters the plan.

The worker's payments range from 3s. 6d.² per month when the age of entry is 20 years to 10s. 10d. per month when the age on joining is 60 years. In every case a sum of 9d. per month is allocated toward unemployment benefits, the remainder being devoted to pension and subsidiary benefits. The employer's contributions vary from 3s. 6d. per month to as high as 31s. 10d. per month in respect of elderly employees joining the society at 60 years of age.

At 65 the employee may retire on a minimum pension of 5s. a week, plus 10s. per year for every year of membership in the society, except that the total pension paid may not exceed a maximum of £1 a week. In case of accident, illness, or unemployment, the employee is entitled to 15s. weekly for 12 weeks, and thereafter to 10s. weekly for a further period of 12 weeks. In case of death or withdrawal from the society before reaching the age of 65, the employee's contributions, with compound interest at 3 per cent, are returned to his dependents or himself, as the case may be.

The society is under the control of a joint committee composed of an equal number of representatives of employers and employees, with an independent chairman. It is to be conducted on actuarial lines,

¹ Data are from report by Clement S. Edwards, American consul at Bradford, Oct. 1, 1931.

² At par, pound=\$4.87, shilling=24.3 cents, penny=2 cents; exchange rate of pound for September, 1932=\$3.47.

as an insurance undertaking, in order that its working may not be interfered with by labor disputes in the wool industry.

The plan has been accepted very quietly, and so far the only criticism brought against it has come from the secretary of the textile unions, who points out that, with wages at their present level, the dues of the new society are too high for it to appeal to the workers generally.

As most of the skilled workers are subject to the provisions of the State insurance schemes, paying a weekly contribution of 9d. for health and pensions benefits, and 10d. (from October 1, 1931) for unemployment insurance, it is suggested they could not reasonably afford further deductions from their wages without seriously lowering still further their reduced standard of living.

It is believed the new textile insurance society will be of the most benefit to nonmanual workers who are in receipt of a salary exceeding £250 per year and who do not contribute to the State insurance schemes. This class of worker has only been able to provide for retirement and insure against the risks of sickness and disablement through commercial insurance companies, and may welcome the opportunity to join with the employers in a joint contributory insurance society.

Milling Industry³

A GROUP pension plan inaugurated by the British milling industry in February, 1932, is notable both because it covers an entire industry and because it was established through the efforts of the joint industrial council of the industry, or, as it is more commonly called in the United States, the Whitley Council.

Work on the scheme began shortly after the Mond conference three years ago and has been in progress ever since. For the past year or more, propaganda work has been done with the workers and the employers so successfully that, when the scheme was inaugurated this February, practically all the companies had joined it. To-day all the milling firms except one have definitely joined the scheme, and the one remaining outside has recently stated its desire to come into the scheme.

The scheme is handled through a large insurance company, and the pension benefits derived from contributions paid are guaranteed by this company and are paid by it directly to the individual members in accordance with the terms of the plan.

All male employees over 18 and under 64 years, other than members of the clerical or administrative staffs, are eligible to membership. For those who entered the service of a member firm later than July 1, 1931, membership is compulsory; for those in the service prior to that time membership was optional up to July 1, at which time the option expired, and membership could not be taken thereafter. For those who chose to enter, service before the scheme was started would be counted as pensionable.

The plan is contributory and the cost is estimated at 2s. per week for each member, half of this being deducted from the employee's wages and the rest paid by the employer.

These contributions will be applied in meeting the cost of pensions for present service and in creating a fund to provide the past-service pensions. It is estimated that, given adequate support of the scheme, the full provision for all past-service pensions will have been made within a term of 25 years, in which case it should become possible either to increase the amount of pension for each future year of service or to reduce future contributions.

³ Data are from report by K. A. H. Egerton, of the American consulate general, London, Mar. 7, 1932.

The normal age of retirement is 65. The pension is £1 per year for each year during which the retirant has been a contributing member, with a further allowance of 10s. a year for each complete year of service prior to January 1, 1931. Membership is suspended during temporary unemployment, whether from illness or other cause, but the member may, if he wishes, arrange to continue payment both of his own and his firm's contributions on his behalf, so that his pension will not be diminished by his temporary suspension. In case of a member's death before receiving the pension, his own contributions will be refunded to his representatives; should he die after being retired on pension, any excess of his own contributions over the amount he has received in pension will be refunded to his representatives.

Perhaps the most valuable feature of the whole plan is that no worker will lose any of the benefits of the scheme by transferring from one firm within the plan to another, all service being counted, regardless of whether it was rendered to one or a dozen employers. Another advantage is that should an employee leave the industry he may either withdraw his contributions or take a pension, commencing at the normal date of retirement, and equal to £1 per annum for each complete year for which he was a member.

All pensions earned under this scheme are to be paid regardless of any rights the worker may have under the national insurance and pension schemes. The Government pension of 10s. a week, payable from 65 onward, is so small a provision for old age that employers feel reluctant to dismiss men who have no more to expect, but, with the pension earned under this plan added to the old-age pension, this objection will disappear.

New Zealand National Provident Fund

THE latest report of the New Zealand provident fund, covering the year ending December 31, 1931, shows a decrease during the year of 4,594 in the number contributing for pensions. Membership in the fund, which came into operation in 1911, is open to all citizens of New Zealand between the ages of 15 and 60, whose income for the three years preceding their application for membership has not exceeded £300¹ per annum. Contributions are graduated according to the benefits the member wishes to secure. One year's contributions entitle the member to maternity benefits; five year's contributions to an allowance, based on the number of dependent children under 14, during incapacity for a period not exceeding three months; and in case of the member's death, the family may claim benefits. On reaching the age of 60 the member is entitled to a weekly pension varying, according to the amount of his contribution, from 10s. to 40s. The various benefits are guaranteed by the State, which itself makes an annual contribution to the fund.

The falling off during the year in the number contributing for pensions included 103 cases of death, 2,952 who gave notice of withdrawal, 974 whose membership lapsed or was canceled, 79 who reached the pension age, and 486 who transferred to some other class

¹ Pound at par=\$4.87; exchange rate for September, 1932, was \$3.47.

of contributor. At the close of the year the number contributing for pensions was 29,359, and their annual contributions as of December 31 amounted to £253,525. At that date the fund was paying retirement and other allowances at the rate of £48,092 per annum to a total of 710 beneficiaries, 647 men and 63 women. The amount in the fund rose from £2,936,203 at the beginning to £3,263,005 at the end of the year. The Government contribution was £49,956 and the amount paid out in maternity benefits, incapacity allowances, allowances to widows and children of members, and retirement allowances was £90,371.

INDUSTRIAL AND LABOR CONDITIONS

Occupational Grouping of Gainful Workers, 1910 to 1930

IN THE last two census decades there have been some significant shifts in the number and proportion of gainful workers 10 years of age and over in the various general occupational divisions, according to figures presented in Occupation Statistics—United States Summary, Fifteenth Census of the United States, 1930. The following statistics from that source show that while the total number of gainful workers 10 years of age and over increased from 38,167,336 in 1910 to 48,829,920 in 1930, or 27.9 per cent, the gainful workers in agriculture decreased 12,388,309 to 10,471,998, or 15.5 per cent. There was a striking shrinkage in the proportion of female gainful workers in agriculture over the two decades.

The percentage of male and female workers combined included in the manufacturing and mechanical industries group fluctuated very slightly in the three census years under review, being 27.9 per cent in 1910, 30.8 per cent in 1920, and 28.9 per cent in 1930. Of the male gainful workers, the proportions in this occupational group for the three census periods were as follows: 29.4 per cent in 1910, 33 per cent in 1920, and 32.1 per cent in 1930. Of the female workers the percentages in the same occupational division showed practically no change from 1910 to 1920, being 22.5 and 22.6, respectively, while the proportion for 1930 was considerably lower—17.5 per cent.

The percentage of gainful female workers in domestic and personal service was 31.3 in 1910 and fell to 25.6 in 1920, while the 1930 census showed an upward swing to 29.6.

In 1910 only 34.3 per cent of the gainful workers in clerical occupations were females and in 1930 approximately one-half—49.4 per cent.

GAINFUL WORKERS 10 YEARS OLD AND OVER, BY GENERAL DIVISIONS OF OCCUPATIONS AND SEX, FOR THE UNITED STATES, 1910, 1920, AND 1930

Census year and general division of occupations	Number			Per cent distribution			Per cent of total	
	Male	Female	Total	Male	Female	Total	Male	Female
1910								
Agriculture.....	10,581,685	1,806,624	12,388,309	35.2	22.4	32.5	85.4	14.6
Forestry and fishing.....	241,249	557	241,806	.8	-----	.6	99.8	.2
Extraction of minerals.....	964,075	1,094	965,169	3.2	-----	2.5	99.9	.1
Manufacturing and mechanical industries.....	8,835,698	1,820,847	10,656,545	29.4	22.5	27.9	82.9	17.1
Transportation and communication.....	2,549,922	115,347	2,665,269	8.5	1.4	7.0	95.7	4.3
Trade.....	3,160,562	472,703	3,633,265	10.5	5.9	9.5	87.0	13.0
Public service (not elsewhere specified).....	426,606	4,836	431,442	1.4	.1	1.1	98.9	1.1
Professional service.....	976,523	734,752	1,711,275	3.2	9.1	4.5	57.1	42.9
Domestic and personal service.....	1,225,395	2,530,403	3,755,798	4.1	31.3	9.8	32.6	67.4
Clerical occupations.....	1,129,849	588,609	1,718,458	3.8	7.3	4.5	65.7	34.3
All occupations.....	30,091,564	8,075,772	38,167,336	100.0	100.0	100.0	78.8	21.2

GAINFUL WORKERS 10 YEARS OLD AND OVER, BY GENERAL DIVISIONS OF OCCUPATIONS AND SEX, FOR THE UNITED STATES, 1910, 1920, AND 1930—Continued

Census year and general division of occupations	Number			Per cent distribution			Per cent of total	
	Male	Female	Total	Male	Female	Total	Male	Female
1920								
Agriculture.....	9,582,666	1,083,146	10,665,812	29.0	12.7	25.6	89.8	10.2
Forestry and fishing.....	269,541	673	270,214	.8	-----	.6	99.8	.2
Extraction of minerals.....	1,087,359	2,864	1,090,223	3.3	-----	2.6	99.7	.3
Manufacturing and mechanical industries.....	10,901,527	1,930,352	12,831,879	33.0	22.6	30.8	85.0	15.0
Transportation and communication.....	2,872,559	224,270	3,096,829	8.7	2.6	7.4	92.8	7.2
Trade.....	3,585,701	671,983	4,257,684	10.8	7.9	10.2	84.2	15.8
Public service (not elsewhere classified).....	727,939	10,586	738,525	2.2	.1	1.8	98.6	1.4
Professional service.....	1,154,221	1,017,030	2,171,251	3.5	11.9	5.2	53.2	46.8
Domestic and personal service.....	1,193,313	2,186,682	3,379,995	3.6	25.6	8.1	35.3	64.7
Clerical occupations.....	1,689,911	1,421,925	3,111,836	5.1	16.6	7.5	54.3	45.7
All occupations.....	33,064,737	8,549,511	41,614,248	100.0	100.0	100.0	79.5	20.5
1930								
Agriculture.....	9,562,059	909,939	10,471,998	25.1	8.5	21.4	91.3	8.7
Forestry and fishing.....	250,140	329	250,469	.7	-----	.5	99.9	.1
Extraction of minerals.....	983,564	759	984,323	2.6	-----	2.0	99.9	.1
Manufacturing and mechanical industries.....	12,224,345	1,886,307	14,110,652	32.1	17.5	28.9	86.6	13.4
Transportation and communication.....	3,561,943	281,204	3,843,147	9.4	2.6	7.9	92.7	7.3
Trade.....	5,118,787	962,680	6,081,467	13.4	9.0	12.5	84.2	15.8
Public service (not elsewhere specified).....	838,622	17,583	856,205	2.2	.2	1.8	97.9	2.1
Professional service.....	1,727,650	1,526,234	3,253,884	4.5	14.2	6.7	53.1	46.9
Domestic and personal service.....	1,772,200	3,180,251	4,952,451	4.7	29.6	10.1	35.8	64.2
Clerical occupations.....	2,038,494	1,986,830	4,025,324	5.4	18.5	8.2	50.6	49.4
All occupations.....	38,077,804	10,752,116	48,829,920	100.0	100.0	100.0	78.0	22.0

Increase in Farm Population During 1932

THE United States Bureau of Agricultural Economics estimates, in a press release of November 1, 1932, that the farm population will be approximately 32,000,000 by the end of 1932, if the increase during the entire calendar year is at the same rate as in the first three months, when there was an estimated net increase of 263,000 persons. During the first three months of the year, 432,000 persons moved from farms to cities and 564,000 persons moved to farms, giving a net farmward movement of 132,000; this figure plus the estimated excess of births over deaths gives the estimated increase of 263,000 for the year.

The net gains in farm population in 1930 and 1931, plus the gain projected for 1932, will more than offset the decrease of approximately 1,500,000 from 1920 to 1930. The low point in farm population since 1910 (the peak year) was 30,169,000 on January 1, 1930. On January 1, 1910, the population was 32,077,000.

The Bureau of Agricultural Economics believes that a considerable part of the farmward movement in normal years consists of persons from the city who have had some farm experience before going to the city. It is thought, however, that comparatively few persons who migrate from farms to cities had previously lived in cities.

The farm-population estimates of the Bureau of Agricultural Economics do not include persons who live outside of incorporated places of 2,500 or more but who do not live on farms. The bureau believes that this group has been increased considerably by unem-

ployed or intermittently employed urban people who have migrated to the country to engage in subsistence gardening. Most of these people are not occupying units that the census would classify as farms, nor are they engaged in commercial agriculture, although they constitute a recent and important addition to the rural nonfarm population.

Conditions in the Upholstery-Weaving Industry in Philadelphia

AT THE request of the Philadelphia upholstery-weaving industry, the Industrial Research Department of the Wharton School of Finance and Commerce, University of Pennsylvania, undertook in 1931 a study of the conditions existing in the industry and made some recommendations to the manufacturers and union for meeting the problems that face them. The data below are taken from the recent report on that study.

Upholstery weaving in the Philadelphia market has a long history, the majority of the present group of mills having been established prior to 1900. In this area, quality goods have been manufactured in small plants, averaging 100 looms and employing highly skilled craftsmen, largely of American and British origin, who in many instances received their training on hand looms both here and abroad. In the years just following the World War a great period of expansion in the production of upholstery fabrics took place owing to the widespread demand for overstuffed furniture. More Jacquard machines were sold between 1919 and 1921 than in any other 3-year period. As the industry expanded, however, Philadelphia found itself at a decided competitive disadvantage as to production costs, since skilled workers paid at higher rates than in other areas were required to weave the better-grade fabrics manufactured by this city's mills. There followed a period of declining working opportunity in Philadelphia, culminating with an order posted by operators that all wages would be reduced by 25 per cent beginning January, 1931. For the first time since 1921 a wage dispute ensued, and as no agreement was reached it was decided to submit the question to arbitration. The decision rendered ordered a temporary wage reduction of 14 per cent, the amount of the cut being determined on the basis of the fall in living costs and the belief that a smaller cut would not help the operators. It was thought that the saving made through this reduction would enable the industry to carry on until a thorough study had been made and a permanent award granted. However, the union refused to abide by the decision and a strike followed that lasted some three months.

At this point the interested groups, i. e., employers and union, jointly requested that the Industrial Research Department of the University of Pennsylvania undertake an investigation of the industry.

With respect to employment and earnings, the pay-roll records show a rapid decline in the numbers of workers employed between 1924 and 1930, a wide range in earnings as between occupations, and the existence of seasonal fluctuations in time worked. The employment index for weavers, using the 1928 total as a base, or 100.0, fell from 137.5 in 1925 to 75.0 in 1930. Average weekly earnings in the principal occupations for all mills having these occupations are shown in the table following, for the years 1924 to 1930.

AVERAGE WEEKLY EARNINGS IN THE PHILADELPHIA UPHOLSTERY-WEAVING INDUSTRY BY OCCUPATIONS, 1924 TO 1930

Occupation	1924	1925	1926	1927	1928	1929	1930
Beaming and warping.....	\$46.63	\$47.60	\$46.47	\$45.28	\$43.01	\$43.38	\$37.86
Dyeing.....	31.44	31.66	32.47	32.36	30.61	30.56	23.36
Loom fixing.....	50.17	51.45	52.36	51.70	51.51	51.83	46.79
Twisting.....	44.44	45.86	45.18	43.25	43.06	43.74	38.80
Weaving.....	34.44	36.70	35.43	33.21	31.52	33.22	27.76
Burling and mending.....	19.61	19.77	19.25	19.19	19.19	19.75	16.83
Finishing and operating.....	23.49	21.74	22.44	22.39	19.24	19.77	19.20
Spooling and winding.....	19.27	20.24	20.53	20.60	20.11	20.64	16.25

In commenting on the reduction in earnings in 1930, it is stated in the report under review that loss of time in that year lowered earnings before the flat wage reduction of 14 per cent went into effect. Such data as were available when the report was prepared showed, further, that 1931 earnings were well below those for 1930.

The recommendations include definite suggestions as to labor, production, fabric designing, and selling policies. With respect to labor policies it is recommended that the manufacturers and union cooperate to reduce labor cost and increase productivity in order to book volume business that would otherwise go to producers who can manufacture at lower cost. It is further recommended that the 14 per cent cut be returned in part or wholly to weavers making short runs, that the 2-loom system be adopted where possible, and that loom fixers be allowed to tend more than one section of looms if the number of looms in a given section falls below a certain level. Additional cuts in salary are urged for all executives and office workers who were not reduced by the 14 per cent ordered for mill employees.

Recommendations regarding improvement of production policies call for a concerted effort to reduce waste in yarns, replacement of old harnesses on equipment, regular inspections, keeping of records, experimentation with increased speed of machinery, testing yarns, and experimentation with improved machinery. The study points out that much obsolete equipment is in use in the industry, operation of which tends to slow down production and reduce earning power.

Decrease in Pay Roll in Ohio Industries

ACCORDING to a recent report by the division of labor statistics of the Ohio Department of Industrial Relations, the annual pay roll of the various industries of Ohio, during the year ending December 31, 1931, was \$1,337,314,493. This pay roll covers 43,236 establishments, including mines and quarries.

The pay roll for 1931 was \$403,016,839, or 23.2 per cent, less than the 1930 pay roll and \$723,034,024, or 35.1 per cent, less than the 1929 pay roll. The wage distribution for 1931 was \$898,865,953 to wage earners; \$240,126,548 to bookkeepers, stenographers, and office clerks; \$82,265,334 to salespeople (not traveling); and \$116,056,658 to superintendents and managers.

Of these 43,236 establishments, 9,683 were manufacturing plants paying out \$571,917,215 to wage earners; \$109,165,152 to bookkeepers, stenographers, and office clerks; \$9,135,088 to salespeople (not traveling); and \$50,905,300 to superintendents and managers,

totaling \$741,122,755. This amount is \$277,642,696, or 27.2 per cent, less than in 1930 and \$560,026,721, or 43.1 per cent, less than in 1929.

During 1931, 876 coal mines produced 20,422,980 tons of coal at a cost of \$17,566,336 in wage and salary payments, and 135 limestone quarries produced 10,899,803 tons of limestone at a cost of \$3,215,282 in wage and salary payments. In the sandstone industry \$1,001,276 was paid in wages and salaries in 1931.

The following table shows the total wages and salaries paid in each of the major industries of the State in 1931, and the amount and per cent of decrease in 1931 as compared with 1929 and 1930:

AMOUNT OF PAY ROLL IN OHIO INDUSTRIES IN 1931 AND AMOUNT AND PER CENT OF DECREASE AS COMPARED WITH 1929 AND 1930, BY INDUSTRIES

Industry	1931		Decrease in pay roll, 1931, compared with specified year			
			Amount		Per cent	
	Estab- lishments reporting	Pay roll	1929	1930	1929	1930
Chemicals.....	461	\$37,502,891	\$6,628,695	\$3,442,213	15.0	8.4
Foods.....	1,685	53,486,427	9,490,021	9,048,207	15.1	14.5
Iron and steel.....	1,697	220,625,904	271,225,642	147,931,626	55.1	40.1
Leather.....	110	13,617,903	5,631,898	1,669,364	29.3	11.0
Liquors and beverages.....	175	3,056,247	766,377	458,769	20.1	13.1
Lumber.....	1,104	21,974,918	16,362,588	7,971,173	42.7	26.6
Metals other than iron and steel.....	544	43,842,538	23,216,347	13,327,388	34.6	23.3
Paper and printing.....	1,160	75,706,352	14,246,006	10,093,517	15.8	11.8
Rubber products.....	104	61,262,607	53,645,509	20,772,163	46.7	25.3
Stone, clay, and glass products.....	708	37,111,898	24,633,613	10,622,124	39.9	22.3
Textiles.....	587	35,983,017	16,852,864	8,415,122	31.9	19.0
Tobacco.....	133	5,747,328	1,666,014	909,084	26.0	15.9
Vehicles.....	265	57,509,210	74,021,363	24,560,404	56.3	29.9
Miscellaneous manufactures.....	950	74,695,515	41,639,784	18,422,542	35.8	19.8
Total manufactures.....	9,683	1,741,122,755	560,026,721	1,277,642,696	43.1	27.2
Agriculture.....	1,777	8,149,083	1,245,466	1,098,856	13.5	11.9
Construction.....	8,272	67,362,308	72,231,295	49,761,362	51.7	43.0
Fisheries.....	24	548,933	74,591	49,178	12.0	8.2
Service.....	10,452	210,047,916	28,243,427	20,317,715	11.8	8.8
Trade, retail and wholesale.....	10,111	186,201,861	26,918,468	21,143,070	12.6	10.2
Transportation and public utilities.....	1,776	101,321,260	23,202,360	26,387,504	18.6	20.7
Mines and quarries.....	1,141	22,560,377	11,082,686	6,616,458	32.9	22.7
Total, all industries.....	43,236	1,337,314,493	1,723,034,024	403,016,839	35.1	23.2

¹ Not exact sum of items, but as given in report.

The figures for the year 1931 as compared with 1929 indicate that there was a total decrease of \$74,021,363, or 56.3 per cent, in the vehicle industry alone. The iron and steel industry shows a loss of \$271,225,642, or 55.1 per cent, in 1931 as compared with 1929. One branch of this industry, steel works and rolling mills, shows a loss of \$102,087,456, or 59.1 per cent. In the rubber industry there was a decrease of 46.7 per cent in 1931 as compared with 1929.

The only gain over 1929 in any industry was made in transportation and public utilities in 1930, showing a gain of \$3,185,124.

In all industries the average number of employees reported for the 12 months of 1929 was 1,306,624; for 1930, 1,161,856; and for 1931, 991,071. The average loss in employment for 1931 as compared with 1929 was 315,553, or 24.2 per cent. Employment in the manufacturing industries for 1929 shows an average of 823,106 persons; for

1930, 673,178; and for 1931, 552,905. Compared with 1929, 1931 shows an average loss of 32.8 per cent.

The above figures include only those employees covered by workmen's compensation insurance, and exclusive of any governmental employees or those engaged in interstate operations. Also, the number of superintendents and managers is not included, but only the amount of salaries paid to them.

Decrease in Number of Agricultural Workers in Great Britain

IN ITS issue of October 10, 1932, Industrial and Labor Information (Geneva) gives the following table, showing the decrease in the number of paid agricultural workers in England and Wales in 1931, as compared with 1930:

AGRICULTURAL WORKERS IN ENGLAND AND WALES, 1930 AND 1931

Year ending June 4—	Regular workers			Casual workers		
	Males 21 and over	Males under 21	Women and girls	Males 21 and over	Males under 21	Women and girls
1930.....	445,708	118,804	65,337	69,783	10,458	31,606
1931.....	434,983	116,915	64,409	62,255	9,347	28,698

It will be observed that the decrease occurs in all groups of workers, but is proportionately greater among the casual than among the regular employees, the figures being, respectively, for a falling off of 10.3 per cent and 2.2 per cent. Among the regular employees the men of 21 and over show the greatest diminution, their decrease being 2.4 per cent, against 1.6 per cent among the males under 21 and 1.4 per cent among the women and girls.

It is stated that in 1932 the total number of agricultural workers, regular and casual employees combined, showed a further decline amounting to 19,500 (2.7 per cent). "Reductions were shown in all classes except casual adult male workers, where there was an addition of 2,300 (3.7 per cent)."

Serfdom and Forced Labor in Hyderabad, India

THE October 3, 1932, issue of Industrial and Labor Information (Geneva), gives a summary of an investigation into forced labor in the State of Hyderabad, undertaken at the order of the Government. A detailed study was made of 12 selected villages, which showed the existence of two forms of forced labor—the jattipani and the bhagela systems. The first is a system of compulsory service, enforced apparently at will by the large landholders. "No payment is made, and there is no limit to the amount of work that may be exacted. The only justification of this service is that the ancestors of the landholders enjoyed such privileges in respect of the ancestors of their subjects." The other system involves a more definite serfdom.

Under the bhagela system, bhagelas or serfs are maintained by all large landholders. The payment of remuneration is by the year in kind; if paid monthly,

remuneration is at a lower rate. In some cases, food is given. The grain or food given as remuneration is less than equivalent to the minimum physical needs of low-class laborers. Service is whole-time and includes any and every sort of work. The change from one master to another is considered immoral, and the master of an absconding bhagela thinks that he has the legal right to compel him to return to service. The idea is also prevalent that the children of a bhagela, whose marriage expenses are paid by his master, should, ipso facto, be bhagelas of the same master. The master is looked upon as having the right to punish, starve, or confine the bhagela for any offense of omission or commission. There is no written agreement of any sort, but the system has been in existence from time immemorial.

Decree Regarding Forced Labor in Indo-China

IN 1930 the International Labor Conference, meeting at Geneva from June 10 to June 28, drew up a draft convention respecting forced labor, designed to limit its use and to bring about its abolition as speedily as possible.

The use of such labor for the benefit of private individuals, companies, or associations, and in work underground in mines, would be immediately prohibited, but during a transitional period and as an exceptional measure recourse might be had to forced labor for public purposes only. The question of final abolition would be considered after five years.

Shortly thereafter the French Government called upon the governors of colonies to submit draft orders bringing the use of compulsory labor within their jurisdictions into accordance with the terms of this convention. In compliance with this mandate, the Governor-General of Indo-China promulgated an order under date of February 5, 1932, relating to the situation in that country. Its terms are given in the October 10, 1932, issue of Industrial and Labor Information (Geneva).

Under this order the Governor General is to decide, on the advice of the heads of the local administrations, in what areas compulsory labor shall be abolished altogether and what restrictions shall be placed upon it elsewhere. In general, such labor is to be used with caution.

Apart from cases where the use of compulsory labor is rendered necessary by unavoidable circumstances, or where it is required for village work under the conditions referred to by the decree, compulsory labor may not be requisitioned in Indo-China except for work of public interest and as an exceptional measure. Undertakings or contractors authorized to make use of compulsory labor for works of public utility will be subject to the provisions of the order, and the works will be placed under direct supervision by the administration.

Limitations Upon Recruiting

For work which will require less than 3,000 working-days, the heads of the local administration may empower the subordinate authorities to requisition the necessary labor, but if more than 3,000 working-days are involved the Governor General's authorization is necessary.

The explanatory report to be submitted with the application for special authority must show the number of working-days required, the average number of working-days for each worker, the reasons why it is impossible to have recourse to voluntary labor, and finally, the reasons for the immediate or imminent necessity of the work proposed and its importance for the community which is called upon to carry it out. The right of recourse to compulsory labor may not be exercised except where it is impossible to obtain voluntary labor under working conditions and at wages equal to those customary for similar work or services in the territory concerned.

Recruiting must be confined to male natives between 18 and 45 years old, with some exceptions, such as officials, teachers, members of religious orders, workers in permanent employ, and the like. The recruiting must be done within a prescribed distance from the place of work, medical examination of the workers upon their arrival at the place of work is required, and precautions must be taken to prevent the illegal use of compulsory labor of women and children. The number recruited must not at any one time exceed one-fourth of the maximum permanent population of able-bodied males of any hamlet or area. No individual may be compelled to work more than 60 days in the year, including time spent in journeying to and from the place of work.

Conditions of Work

THE order determines the conditions of work and provides in particular that the maximum hours of work shall be 9 in the day, overtime being paid for at 50 per cent above normal rates; that piecework shall be substituted for timework, this method being regarded simply as a means of education in labor; that wages shall be fixed at the same rates as the wages in force for the same kind of work in the district of employment, or in that where the men were recruited, whichever is the higher; that wages shall be paid direct to the workers; that traveling days shall be regarded as working-days for the payment of wages; that any deduction from wages shall be prohibited except in cases where a food ration is provided for the workers; that they shall be entitled to the weekly rest and the traditional public holidays.

Other provisions are made for the supply of suitable housing, medical care, and the like.

Compulsory Labor for Transport

A SECOND order regulates the use of forced labor for transporting persons and property. In general this form of labor may be used only by European and native officials of the local and general services traveling in Indo-China on official business. The provisions as to who may be requisitioned, conditions of work, wages, and overtime, and the like, are much the same as those in the first order. The maximum distance to be covered by porters is limited to 100 kilometers or four days' march, and their compulsory employment is specifically prohibited "whenever it is possible to make use of animal or mechanical traction."

MINIMUM WAGE

Work of Massachusetts Minimum Wage Commission

THE annual report of the Massachusetts Department of Labor and Industries for 1931 contains a summary of the work done during the year in the enforcement of the minimum wage law in that State. The functions of the minimum wage commission are thus defined:

Investigating the wages of women employees in occupations where there is reason to believe that the wages of a substantial number are below the requirements of healthful living; establishing wage boards to recommend minimum rates for women and minors; entering wage decrees based on the recommendations of the boards; inspecting to determine compliance with the decrees; and publishing the result of the findings.

Minimum wage decrees have been set for 21 industries, including boot and shoe cut stock and findings, bread and bakery products, brush making, candy making, canning, preserving, and minor lines of confectionery, corset making, druggists' preparations, electrical equipment and supplies, jewelry and related lines, knit goods, laundries, men's clothing, men's furnishings, millinery, muslin underwear, office cleaning, paper-box making, retail stores, stationery goods and envelopes, toys, games, and sporting goods, and women's clothing. During the year ending November 30, 1931, investigations were made of the pocketbook and leather-goods industry and of the waste-sorting industry, with a view to determining whether wage decrees were needed for these lines. For the pocketbook and leather-goods industry, pay-roll transcripts were taken for the months of June and July.

Pay-roll records were available for tabulation for 820 women employed in 30 firms. Of this number, 88.2 per cent were earning under \$15 a week and 78.7 per cent were earning under \$13 a week. Of the 714 women paid on a part-time basis, 79.3 per cent had rates for full-time employment below \$15 a week and 69 per cent had rates below \$13 a week. * * * The commission has voted to form a wage board for this industry.

In the waste-sorting industry it was found that of 460 women employed in 41 shops, 25.6 per cent had rates under \$10, 68.9 per cent under \$11, and 73.9 per cent under \$12 a week.

Inspection and Enforcement

REGULAR inspections are made to determine compliance with the wage decrees, and numerous reinspections are necessary in connection with the adjustment of noncompliances found at the time of the original inspection. In addition, many inspections are made as a result of complaints received. The general depression increased the difficulty of securing compliance with the wage decrees, and in some cases requests were received for downward revision of the established wage. Up to the end of the year no such action had been taken.

When, on inspection, cases are discovered in which firms are paying less than the minimum rate set by a wage decree, every effort is made to secure adjustment of the difficulty without resort to publicity and without bringing about the discharge of the underpaid employees. If the agent discovering the infraction can not induce the employer to correct the matter, the latter is invited to confer with the commission and the situation is discussed with a view to finding some acceptable way of meeting the terms of the decree. Sometimes a change from time to piece work, or vice versa, may make it possible for the employee to earn the minimum rate; sometimes a transfer to another kind of work proves effective; and sometimes, when no other method of reduction can be applied, a reduction of hours, so that the women are paid for the hours worked on the basis of the minimum rate, may be suggested. If no adjustment is secured, and the employer insists upon disregarding the decree, publication of the name of the offending firm is used as a last resort.

In the course of the year's work 2,987 cases of noncompliance were found in 293 establishments, and of these, 1,754 were settled or adjustment was promised before the close of the year.

With respect to the cases settled, wages were raised for 542 women in 100 establishments. In 79 other cases women were enabled to earn the minimum on piecework or by reduction of hours or change of work. Adjustment was promised or reported in 250 additional cases.

There were 33 women in 13 establishments who came under the piece-rate ruling. This ruling provides that in the case of experienced operators, where the great majority on a given operation are earning the minimum or over, the rates are considered in accordance with the decree.

At the beginning of the fiscal year there were 3,424 cases of noncompliance in 300 firms outstanding from previous years. Retail stores were responsible for the largest number of these, 1,538 cases in 177 firms, "the majority of which have been advertised one or more times." By the end of the year a new source of difficulty had appeared in connection with the garment-making industry. New firms from other States had come into Massachusetts, located in the textile centers, where labor was abundant and unemployment rife, and in a number of cases were paying such low wages as to create a serious problem.

Summary of Year's Work

THE entire number of cases handled during the year include, in addition to those in connection with the regular inspection program, the cases pending from previous years and represent approximately 28,000. The total noncompliance cases are 2,987 from the regular inspection work, with 3,424 pending at the beginning of the year and 504 new cases found in the reinspection of these firms. The entire number is 6,915.

Of this number, 5,608 have been settled or adjustment promised before the close of the year. Wage adjustments or equivalent arrangement enabling the employees to earn the minimum were effected in 917 cases. In a number of additional instances adjustments were promised. There were 3,556 cases in 280 firms advertised. There are pending at the close of the year 1,307 cases. A large part of these are under decrees listed for publication.

WOMEN IN INDUSTRY

Marital Condition of Gainfully Occupied Women in 1930

IN 1930, approximately one-fourth (24.8 per cent) of the women 15 years of age and over in the United States were gainfully employed, as compared to 18.9 per cent over 42 years ago. In 1890, married women constituted only 13.9 per cent of the women with gainful occupations; in 1930 they formed 28.9 per cent, as shown in Table 1, taken from a press release of the United States Bureau of the Census for October 12, 1932.

TABLE 1.—NUMBER AND PROPORTION OF WOMEN 15 YEARS OLD AND OVER GAINFULLY OCCUPIED, BY MARITAL CONDITION, 1890 TO 1930

Census year and marital condition	Women 15 years old and over			
	Total number	Gainfully occupied		
		Number	Per cent of total	Per cent distribution
1890:				
Single and unknown.....	6, 250, 912	2, 531, 398	40. 5	68. 2
Married.....	11, 124, 785	515, 260	4. 6	13. 9
Widowed and divorced.....	2, 226, 481	665, 486	29. 9	17. 9
Total.....	19, 602, 178	3, 712, 144	18. 9	100. 0
1900:				
Single and unknown.....	7, 606, 772	3, 307, 497	43. 5	66. 2
Married.....	13, 810, 057	769, 477	5. 6	15. 4
Widowed and divorced.....	2, 832, 362	920, 441	32. 5	18. 4
Total.....	24, 249, 191	4, 997, 415	20. 6	100. 0
1910:				
Single and unknown.....	9, 001, 342	4, 602, 102	51. 1	60. 2
Married.....	17, 684, 687	1, 890, 661	10. 7	24. 7
Widowed and divorced.....	3, 361, 296	1, 147, 065	34. 1	15. 0
Total.....	30, 047, 325	7, 639, 828	25. 4	100. 0
1920:				
Single, widowed, divorced, and unknown ¹	13, 858, 582	6, 426, 515	46. 4	77. 0
Married.....	21, 318, 933	1, 920, 281	9. 0	23. 0
Total.....	35, 177, 515	8, 346, 796	23. 7	100. 0
1930:				
Single and unknown.....	11, 359, 038	5, 734, 825	50. 5	53. 9
Married.....	26, 170, 756	3, 071, 302	11. 7	28. 9
Widowed and divorced.....	5, 307, 355	1, 826, 100	34. 4	17. 2
Total.....	42, 837, 149	10, 632, 227	24. 8	100. 0

¹ This group was not subdivided in 1920.

It is believed by the Bureau of the Census that there were too many women scheduled as agricultural laborers in 1910 and too few in 1920; that, consequently, the increase from 1900 to 1910 in the percentage of women 15 years of age and over in gainful occupations is too great and that the decline from 1910 to 1920 shown in the corresponding percentage may be only an apparent decline.

In Table 2, the percentages of women 15 years of age and over in gainful occupations are given for the various States, by marital condition. Very considerable variations are shown in these percentages. For example, only 15.4 per cent of the women 15 years and over in

West Virginia were gainfully occupied in 1930, while 35.2 per cent of the women of South Carolina and 43.4 per cent of the women of the District of Columbia were so occupied. While only 5.9 per cent of the married women of North Dakota were in gainful occupations, 29.9 per cent of the married women of the District of Columbia were in paid employment. Of the gainfully occupied women in Minnesota 19.4 per cent were married; in Florida, 45.8 per cent.

TABLE 2.—NUMBER OF WOMEN 15 YEARS OLD AND OVER, BY MARITAL CONDITION AND PROPORTION GAINFULLY OCCUPIED, BY DIVISIONS AND STATES, 1930

Division and State	Total		Single and unknown		Married		Widowed and divorced		Per cent of total gainfully occupied		
	Total number	Per cent gainfully occupied	Total number	Per cent gainfully occupied	Total number	Per cent gainfully occupied	Total number	Per cent gainfully occupied	Single and unknown	Married	Widowed and divorced
New England:											
Me.....	283,484	24.1	73,104	49.0	172,270	12.3	38,110	29.8	52.3	31.1	16.6
N. H.....	171,907	29.0	48,303	56.3	99,922	15.3	23,682	31.2	54.5	30.7	14.8
Vt.....	126,417	22.4	32,359	47.3	76,472	10.3	17,586	29.4	54.0	27.7	18.2
Mass.....	1,620,410	32.6	553,790	64.9	869,725	12.8	196,895	28.8	68.1	21.1	10.8
R. I.....	256,835	34.2	85,380	69.1	140,578	14.1	30,877	29.1	67.2	22.5	10.3
Conn.....	585,639	30.3	182,462	65.1	338,724	12.1	64,453	27.2	67.0	23.1	9.9
Mid. Atlantic:											
N. Y.....	4,721,139	29.9	1,428,587	64.7	2,738,973	12.0	553,579	29.0	65.4	23.2	11.3
N. J.....	1,470,247	28.2	417,478	63.9	884,506	11.4	168,263	28.2	64.2	24.4	11.4
Pa.....	3,356,081	23.9	975,351	54.8	1,999,302	8.3	381,428	26.1	66.8	20.8	12.4
E. N. Central:											
Ohio.....	2,384,808	22.6	595,961	50.0	1,496,574	10.2	292,273	30.4	55.2	28.3	16.5
Ind.....	1,155,964	20.3	263,599	45.0	744,990	9.6	147,375	30.3	50.4	30.6	19.0
Ill.....	2,780,510	25.7	738,882	56.6	1,701,891	11.2	339,737	31.3	58.5	26.7	14.9
Mich.....	1,629,915	22.0	374,829	50.5	1,075,586	10.6	179,500	31.2	52.6	31.8	15.6
Wis.....	1,009,970	21.3	281,204	49.2	621,285	7.7	107,481	26.7	64.4	22.2	13.4
W. N. Central:											
Minn.....	882,618	22.7	271,100	49.6	519,131	7.5	92,387	29.4	67.0	19.4	13.6
Iowa.....	872,053	18.7	226,933	42.1	543,432	7.4	101,688	26.9	58.6	24.7	16.8
Mo.....	1,328,759	22.4	324,288	47.7	825,087	10.1	179,384	33.6	51.9	27.9	20.2
N. Dak.....	205,764	17.5	65,366	36.0	124,632	5.9	15,766	32.8	65.4	20.3	14.4
S. Dak.....	218,763	17.0	61,349	35.8	138,030	6.7	19,384	30.7	59.0	25.0	16.0
Nebr.....	471,298	19.0	124,467	41.4	296,670	7.9	50,161	28.8	57.6	26.3	16.1
Kans.....	653,414	18.2	156,201	38.6	418,552	8.3	78,661	30.6	50.6	29.1	20.2
S. Atlantic:											
Del.....	85,276	24.4	22,264	50.9	52,344	12.1	10,668	29.6	54.4	30.4	15.1
Md.....	582,733	26.9	160,853	53.2	346,675	13.5	75,205	32.6	54.5	29.9	15.6
D. C.....	204,556	43.4	62,371	65.8	109,427	29.9	32,758	45.9	46.3	36.8	16.9
Va.....	800,589	22.6	225,346	37.6	475,428	12.4	99,815	36.9	47.0	32.6	20.4
W. Va.....	532,849	15.4	133,807	31.8	346,568	6.9	52,474	29.0	52.1	29.3	18.6
N. C.....	1,001,408	26.2	294,827	42.1	596,027	15.7	110,554	40.9	47.2	35.5	17.2
S. C.....	553,365	35.2	161,167	49.2	318,837	24.0	73,361	53.0	40.7	39.4	20.0
Ga.....	972,461	30.9	251,000	44.5	573,377	19.8	147,484	50.9	37.2	37.8	25.0
Fla.....	513,588	28.8	108,803	41.2	326,812	20.7	77,973	45.3	30.3	45.8	23.9
E. S. Central:											
Ky.....	855,056	17.0	205,360	32.7	543,928	7.7	105,768	33.9	46.3	28.9	24.7
Tenn.....	883,297	21.7	220,629	35.7	543,405	12.0	119,263	40.0	41.1	34.0	24.9
Ala.....	861,967	27.5	214,710	42.9	524,158	16.2	123,099	49.1	38.8	35.7	25.5
Miss.....	653,107	32.5	150,755	44.4	409,389	22.7	92,963	56.3	31.5	43.8	24.6
W. S. Central:											
Ark.....	595,127	18.9	126,692	31.7	388,783	9.8	79,652	42.8	35.8	33.9	30.3
La.....	703,077	26.3	179,020	42.1	424,774	15.2	99,283	45.6	40.7	34.9	24.4
Okla.....	764,569	16.8	163,408	29.7	513,982	9.0	87,179	38.4	37.9	36.0	26.1
Tex.....	1,933,472	21.3	451,251	36.9	1,231,276	11.5	250,945	41.2	40.5	34.4	25.1
Mountain:											
Mont.....	166,045	19.4	40,369	39.4	108,514	9.0	17,162	38.1	49.4	30.3	20.3
Idaho.....	136,154	16.3	31,487	31.7	91,745	8.3	12,922	35.8	44.9	34.3	20.8
Wyo.....	67,257	18.8	14,214	37.5	46,831	10.3	6,212	40.4	42.1	38.1	19.8
Colo.....	357,236	22.6	83,808	44.1	226,078	11.5	47,350	37.4	45.9	32.1	22.0
N. Mex.....	126,945	17.1	29,908	29.6	82,557	9.1	14,480	37.1	40.6	34.6	24.7
Ariz.....	133,547	22.2	28,758	37.1	87,791	14.0	16,998	39.6	35.9	41.4	22.7
Utah.....	158,726	18.2	41,418	39.5	99,613	6.9	17,695	32.0	56.5	23.9	19.6
Nev.....	27,108	21.7	5,116	38.4	18,232	13.1	3,760	41.2	33.3	40.4	26.3
Pacific:											
Wash.....	545,790	23.2	123,569	45.5	352,466	12.2	69,755	38.9	44.4	34.1	21.5
Oreg.....	339,219	23.9	75,001	45.2	218,946	13.6	45,272	38.4	41.9	36.7	21.4
Calif.....	2,096,630	26.6	471,534	49.2	1,286,461	15.5	338,635	37.1	41.6	35.8	22.6
United States.....	42,837,149	24.8	11,359,038	50.5	26,170,756	11.7	5,307,355	34.4	53.9	28.9	17.2

CHILD LABOR

Report of Advisory Committee on Employment of Minors in Hazardous Occupations

THE Committee on Vocational Guidance and Child Labor of the White House Conference on Child Health and Protection recommended that an advisory committee of experts be appointed to work in cooperation with the Children's Bureau in determining existing conditions with reference to occupational hazards and in formulating standards for the protection of minors against such hazards. In pursuance of this recommendation, the bureau appointed a committee which made available through its membership the experience of specialists in labor law administration, safety engineers, and industrial hygienists. The committee met in Washington, May 24-26, 1932, and has embodied the unanimous conclusions reached at this conference in the following report. Because of the rapid changes which take place in industrial processes, requiring new substances, new machines, and new methods of operation, and because of the discovery of the effects of old processes and old methods, these recommendations may require revision from time to time. The Children's Bureau plans to ask the help of the committee in making such revisions in the future.

This report presents recommendations on the basis of existing knowledge of hazardous occupations. It is believed it will be of great value to State boards which, under a flexible law, have authority to make rulings on this subject and in the revision of standards which are embedded in child labor laws.

Report of the Committee

AVAILABLE statistics and recent investigations, limited as they are, stress the urgent need for more adequate protection of young workers against industrial accidents and occupational diseases. It has long been recognized that the natural curiosity, lack of prudence, and imperfect muscular coordination, inherent in youth, make it dangerous to employ boys and girls in proximity to complicated machinery. Furthermore, adolescents are more susceptible than adults to such hazards as poisonous substances, vitiated air, and nervous and physical strain. Yet child-labor legislation has been slow to take into account this peculiar susceptibility of the young worker to accident and occupational disease. At first it was thought sufficient to keep children out of certain establishments or industries up to a fixed age; once past that age they were allowed to work as if they were adult. The idea that they should be prohibited from engaging in certain special kinds of work even after they were old enough to enter industry developed late and has been embodied in laws and rulings which even to-day are incomplete and lacking in uniformity. Some laws contain only the most general provisions against employments dangerous to life or limb, to health or morals; others apply to a long list of specified occupations. Some provide that these lists may be supplemented from time to time by rulings of special boards. On

the whole, the mass of this legislation has been formulated without sufficiently detailed knowledge of modern industrial conditions. Occupations prohibited in one State are entirely unregulated in another, and many States have failed to prohibit occupations that are acknowledged to be extremely hazardous. One of the most obvious weaknesses is the failure to regulate adequately the employment of minors 16 and 17 years of age, although high accident rates indicate that this group of immature workers is in great need of protection.

The committee has given consideration only to those occupations in which accident or health hazards are involved. Research is continuing along several lines, including the hazards involved in messenger service and in the operation of dangerous power-driven farm machinery. The committee's findings as given below will need revision from time to time in the light of increasing information and changing industrial conditions.

Specific recommendations—Minors under 18

It is the sense of this committee that the following kinds of employment involving exposure to serious hazards should be prohibited to minors under 18 years of age:

I. Occupations involving mechanical hazards (general):

101. In construction work of all kinds, including demolition or repair work, on buildings, bridges, roads, sewers, subways, or in any other work involving excavation, *except* in the erection or repair of private dwellings and structures appurtenant thereto of not more than three stories in height; *provided, however*, that minors under 18 shall not work on any scaffolding or do any heavy work in connection with any such construction.
102. In shipbuilding or in or on dry docks or on ways or structures in the shipbuilding industry.
103. In work on steam or electric railways of all kinds:
Exception: Shop operations other than those hereinafter prohibited.
- 104 (a). In work connected with the generation of electricity, or the outside erection, maintenance, or repair of electric wires;
- (b). In the inside installation, maintenance, or removal of electric wires, meters and equipment at live voltages of more than 50 volts—work on dead lines to be permitted only when means are provided (as by locking switches open) to insure that lines remain electrically dead;
- (c). In the operation of electrical utilization equipment or appliances at any voltages higher than 250.
105. In the manufacture, purification, storage, or distribution of coal gas, water gas, or natural gas, or in the operation of gas pumping stations connected therewith.
106. In or about oil wells, oil-drilling operations, or oil refineries.
107. In or about mines, quarries, sand, gravel, or clay banks or pits, including all surface work connected with any mining or quarrying operation.
108. On rock or coal crushers.
109. In the handling, loading, or unloading of coal at storage yards or distribution points where power-driven machinery for the conveying or handling of coal is used.
110. In stone cutting or polishing.
111. In or about ore-reduction works, smelters, hot rolling mills, furnaces, foundries, forging shops, or any other places in which the heating, melting, or heat treatment of metals is carried on.
112. In the cutting or welding of metals by gas or electricity.
113. In or in connection with hot galvanizing or tinning processes.
114. In the manufacture, transportation, or use of explosives, or explosive or highly inflammable substances.
115. In stockyards, in abattoirs, or in slaughtering or butchering departments in the meat-packing industry.

- 116. In work on commercial threshing crews.
- 117. In lumbering or logging operations.
- 118. In the loading, unloading, piling or storing of heavy lumber.
- 119. In or about saw or planing mills.
- 120. In or about junk or metal-scrap yards.
- 121. In or in connection with the navigation or operation of any boat or vessel.
- 122. As stevedores or longshoremen, or in the handling of marine freight.
- 123. In or about pulp mills, or in establishments manufacturing paper, cardboard, box board, press board, or similar products from pulp, refuse, or rags.
- 124. In employment in tanning establishments that specifically pertains to the processes or involves the operation of machinery used in the tanning of hides or their preparation for tanning.
- 125. In or in connection with processes in the manufacture of rubber or rubber goods.
Exception: In finishing, sorting, inspecting, or packing, or work in dental laboratories.
- 126. In the outside cleaning of any windows the sills of which are located more than 10 feet above grade. (The level of an adjoining flat roof may be taken as grade.)
- 127. In the care or firing of steam or water boilers:
Exception: Domestic hand-fired coal-burning boilers.
- 128. As chauffeurs or assistants to chauffeurs, or as helpers or delivery boys on motor vehicles.

Exception:

Clerical or office work. Recommendations 101 to 128, inclusive, shall not apply to persons employed in offices or at clerical work in the industries specified who are exposed only to hazards common to office or clerical employment.

II. Occupations involving mechanical hazards (specified machines):

PRIME MOVERS

- 201. In or assisting in the operation of gas, oil, or steam engines or other prime movers.

HOISTING MACHINERY

- 202. In the care, custody, operation or repair of elevators, cranes, derricks or other hoisting apparatus, or assisting therein.

Exception: In the operation of dumb-waiters as defined in section 3 of the American Standards Association Safety Code for Elevators, Dumb-Waiters and Escalators, or of elevators equipped only for automatic operation.

WORKING MACHINERY

(Prohibition to apply to operating, assisting in operating, or taking material from, the following machines):

BAKERY AND CRACKER-MAKING MACHINERY

- 203. Dough brakes or mixing machines in bakeries, or cracker-making machinery.

LAUNDRY AND DRY-CLEANING MACHINERY

- 204. Power-driven laundry or dry-cleaning machinery.

LEATHER AND BOOT AND SHOE MACHINERY

- 205. Molding, splitting, rolling, perforating, stamping, dieing-out, heel compressing, shank reducing, leveling, welting, embossing, burnishing, clicking, skiving, stripping, or buffing machines used in the leather or boot and shoe industries.

MEAT-GRINDING AND MEAT-CUTTING MACHINERY

- 206. Power-driven meat-grinding or meat-cutting machines.

METAL-WORKING MACHINERY

- 207. Grinding, abrasive, polishing, or buffing wheels; *provided*, that apprentices, operating under the provisions set up under Exception (b), page 5, may grind their own tools.
- 208. Metal-cutting machines having a guillotine action.
- 209. Wire-drawing machines.
Exception: Work on fine sizes of wire commonly drawn through diamond dies.
- 210. Machinery used in the cold rolling of heavy metal stock.
- 211. Metal plate bending machines handling material of more than 0.2145 inch in thickness.
- 212. Power-driven metal planing machines.
- 213. Circular saws used in the cutting of metals.
- 214. Boring mills.
- 215. Wire-stitching machinery.

MOTION-PICTURE MACHINERY

- 216. Motion-picture projection machinery.

PAPER AND PAPER-PRODUCTS MACHINERY

- 217. Machinery of stamping or punch-press type used in the manufacture of paper or paper goods (including paper-lacing machines) if the clearance between the ram and the die or the stripper exceeds one-fourth inch.¹
- 218. Paper-cutting machines having a guillotine action.
- 219. Paper punches or line perforators.
- 220. Creasers, slitters, or corrugating, crimping, embossing, plating, printing, or graining rolls used in the manufacture of paper and paper products which are not guarded at the point of operation.
- 221. Corner-staying, corner-cutting, or ending machines used in the paper-box industry if the opening to meet the plunger exceeds one-fourth inch.¹
Exception: Such corner-staying machines equipped with an automatic device that will instantly stop the downward motion of the plunger should the finger of the operator come between the plunger and the anvil.

PRINTING MACHINERY

- 222. Power-driven printing presses.
- 223. Monotype or linotype machines.
- 224. Embossing machinery used in the printing industry.

TEXTILE MACHINERY

- 225. Openers, pickers, cards, or lappers used in the textile industry.

WOODWORKING MACHINERY

- 226. Power-driven woodworking machinery.

MISCELLANEOUS MACHINERY

- 227. Machinery having a heavy rolling or crushing action, such as paper rolls, corrugating rolls, or rolls used in the printing of textiles.
- 228. Picker machines used in picking wool, cotton, hair, or other materials.
- 229. Power shears of all kinds.
- 230. Punch presses or stamping machines if the clearance between the ram and the die or the stripper exceeds one-fourth inch.¹
- 231. Roller mixers, pug mills, putty chasers, or brick molding machinery of the pressure type.

¹ One of the members of the committee, Mr. Ainsworth, believes that this should be three-eighths inch instead of one-fourth inch.

OTHER MACHINE HAZARDS

- 232. In oiling, cleaning, or wiping machinery in motion.
- 233. In applying belts to a pulley in motion or assisting therein.
- 234. In proximity to any unguarded belt or gearing.

Exceptions:

- (a) Clerical or office work: Recommendations 201 to 234, inclusive, shall not apply to persons employed in offices or at clerical work in the industries specified who are exposed only to hazards common to office or clerical employment;
- (b) Apprentices: Employment on any of the machines named in Recommendations 201 to 234, inclusive, may be permitted in the case of minors between 16 and 18 years of age under conditions of bonafide apprenticeship to a trade. Power to set up and enforce standards for the adequate control of apprenticeship and to determine the trades to which such standards and the machines to which such exemptions shall apply shall be given to the State agency administering the child labor law. Only after such standards have been set up shall any exception to these provisions be permitted.

III. Occupations involving health hazards:

- 301. In establishments in which heavy chemicals are manufactured.
- 302. In the handling of unsterilized hides or animal hair.
- 303. In occupations involving exposure to extreme heat, cold, humidity, or dampness, or to sudden, frequent, or extreme variations thereof. (More specific standards as to the degree of exposure and as to what may be considered extremes of, or extreme variations of, temperature, humidity, or dampness, are to be determined after further study by a subcommittee appointed as outlined under General Recommendations, 6b.)
- 304. In occupations involving exposure to free silica dust, asbestos dust, or other dusts in injurious quantities.
- 305. In occupations involving exposure to the following substances:
 - (a) Nitro or amido derivatives of benzol or toluol.
 - (b) Arsenic or its compounds.
 - (c) Benzol.
 - (d) Carbon bisulphide.
 - (e) Chlorine.
 - (f) Creosote.
 - (g) Hydrocyanic acid or its compounds.
 - (h) Hydrofluoric acid or its compounds.
 - (i) Hydrogen sulphide.
 - (j) Lead or its compounds.
 - (k) Mercury or its compounds.
 - (l) Mesothorium or its radioactive derivatives.
 - (m) Nitrous gases.
 - (n) White or yellow phosphorus.
 - (o) Radium or its radioactive derivatives.
 - (p) Tetrachlorethane.
 - (q) Other substances having similar injurious properties.
- 306. In occupations involving excessive exposure to the following substances:
 - (a) Antimony or its compounds.
 - (b) Carbon dioxide.
 - (c) Carbon monoxide.
 - (d) Carbon tetrachloride.
 - (e) Chromic acids, chromates, or bichromates.
 - (f) Corrosive substances.
 - (g) Methanol.
 - (h) Petroleum or its low-boiling distillates such as gasoline, naphtha, or benzine.
 - (i) Tar.
 - (j) Trichlorethylene.
 - (k) Turpentine.
 - (l) Other substances having similar injurious properties.

Exceptions:

Clerical or office work: Recommendations 301 to 306, inclusive, shall not apply to persons employed in offices or at clerical work in the industries specified who are exposed only to hazards common to office or clerical employment.

Specific recommendations—Minors under 16

IV. Occupations involving mechanical and health hazards:

The committee recognizes that for children under 16 greater protection from the hazards of industry is essential than for older boys and girls and therefore indorses the following recommendations of the 1930 White House Conference with reference to the employment of children under 16:

401. Children under 16 should not be permitted to work on or in connection with power-driven machinery of any kind or in close proximity to such machinery.
402. Children under 16 should not be permitted to work in any employment.
Exception: Children between 14 and 16 may be employed when schools are not in session in a carefully restricted list of occupations.

General recommendations

1. Power of State labor boards to make rulings with reference to the employment of minors in hazardous occupations.
 - (a) The committee strongly indorses the recommendations of the 1930 White House Conference on Child Health and Protection that "In addition to the prohibitions by law of hazardous occupations for minors, power should be given to State labor boards to determine what are dangerous and injurious occupations and prohibit minors' employment therein, and continuous study should be made by these State boards to keep prohibitions abreast of new industrial hazards."
 - (b) It is the opinion of the committee that, so far as is practicable, provisions relating to occupations involving employment on specific machines or special conditions of employment in which the hazards involved are subject to frequent change should be promulgated through rulings of State boards. These boards should have power to revise from time to time the rulings that they have laid down. In States in which no State labor board exists, the committee recommends that the State department administering the child labor law or a continuous committee of at least three members affiliated therewith make such study and enact such rulings.
2. Enforcement of laws or rulings with reference to the employment of minors in hazardous occupations.
 - (a) In order that minors may be given the full protection to which they are entitled under the law the committee recommends the general adoption of the measures recommended by the White House Conference with reference to the administration of child labor laws, including especially the establishment of adequate inspection forces.
3. Extra compensation legislation.
 - (a) As a means of preventing industrial accidents to minors and of reducing their illegal employment the committee indorses the recommendations of the White House Conference that employers of minors injured while illegally employed be required to pay not only the regular compensation payable under the act but an additional sum at least equal to that amount, the employer to be made personally liable for the payment of the additional amount.
4. Machinery or other apparatus in educational and other institutions.
 - (a) The committee emphasizes the necessity of proper safeguarding of machines and apparatus used in educational, charitable, and corrective institutions, public and private, and recommends that authorization be given to the appropriate State agency to compel the safeguarding of all machines and apparatus and of the use of chemicals in such institutions and to see that operations on such machines or apparatus or in connection with such chemicals are conducted only under the personal supervision of a properly qualified instructor; and the aforesaid agency should also provide inspection to see that such safeguards are adequately maintained.
5. Conditions of work.
 - (a) As a means of preventing the employment of minors under conditions injurious to health, the committee urges the adoption of the child-labor recommendations of the White House conference with reference to hours of work, night work, conditions of work, and periodical physical examinations.

5. Conditions of work—Continued:

(b) The committee recognizes the hazards of occupations involving exposure to skin or tissue irritants or infections, or to the possibility of tenosynovitis or bursitis, or allergic action. Rather than suggest the prohibition of the employment of minors in all occupations in which such hazards may occur, however, it recommends that the conditions producing the hazard be controlled² and that the employment of minors in occupations involving the hazards depend upon the efficacy of the control of these conditions, as determined by the State agency enforcing the child labor law.

(c) Similarly, the committee recognizes the injurious consequences of constant standing in one position, maintenance of faulty postures, continuous repetition of movements, pressures or blows, and lifting of heavy weights, but believes that these are also matters that should usually be subjected to control by corrective measures, rather than by exclusion of minors from all the occupations that may involve these hazards.

6. Further information to be obtained for the use of the committee.

(a) In the light of the statistics of vehicular accidents to minors in industry compiled for the committee by the State departments of labor of New York and Pennsylvania, the committee recommends that further information on this subject be obtained by the Children's Bureau particularly for accidents to minors in messenger and delivery service, and that the committee postpone action with reference to the regulation of the employment of minors in such occupations, except in so far as already covered by recommendation 128, until such time as this information is available.

(b) It is the sense of the committee that in the interest of uniformity of requirements, for the education of employers in what constitutes safe conditions of employment for minors, and for the guidance of the enforcing authorities in the various States, it is important that so far as possible definite standards be developed for the conditions fixed by the regulations recommended herein and to that end requests the Children's Bureau to appoint appropriate subcommittees to study these questions and to report their findings to this committee.

7. Statistics of industrial accidents to minors.

(a) Inasmuch as the information currently available regarding the extent and nature of industrial injuries to minors is most limited and fragmentary, the committee reaffirms the recommendations of the White House conference that the various State agencies develop programs for the continuous study of industrial accidents to minors, including the compilation of comparable and adequate statistics of accidents to minors. The committee further requests that the Children's Bureau cooperate with the States in the preparation of forms for the tabulation of such statistics on a uniform basis, and in assembling, compiling, and publishing annually such figures.

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² Suggested measures of control are preliminary physical examinations, periodic examinations, elimination of the more susceptible workers either by previous tests or experience, and, particularly in the case of tenosynovitis, by enforcing gradual habituation to the work and by limiting the amount of stress or strain to which the worker is subject.

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Trend of Child Labor in the United States, 1920 to 1931

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IN 1921 the Children's Bureau of the United States Department of Labor first began systematically to collect and analyze statistics of employment certificates issued to children going to work in various States and cities throughout the United States.¹ Annual reports of the number of certificates issued are received by the Children's Bureau from a steadily increasing number of State and city issuing offices. Although all children going to work do not receive certificates, either because the law does not require it or because they go to work illegally, and although reports are not received from all the certificating officers, the number reporting is large enough to indicate the trend in the numbers of children going to work, and the extent of their gainful employment for intercensal years.

For relatively few places are reports of certificates issued available for each year since 1920. However, with the exception of a gap for certain cities of one or two years, the number issued annually to 14 and 15 year old children over the 12-year period, 1920-1931, in 13 representative cities of 100,000 population or more² scattered over the country has been obtained. According to the census figures, 18 per cent of the 14 and 15 year old children engaged in gainful nonagricultural occupations in the country were employed in these 13 cities in 1920; 15 per cent of the child workers of these ages were employed in these cities in 1930. Thus they constitute a fair sample.

¹ The first analysis was published in the Monthly Labor Review for April, 1921, and was followed by a supplementary report in the Review for September, 1923. Since that time, summaries of the figures obtained have been published in the annual reports of the Children's Bureau.

² Baltimore, Boston, Bridgeport, Louisville, Milwaukee, Minneapolis, New Haven, New York City, Philadelphia, Providence, St. Paul, San Francisco, Wilmington.

For the period under consideration the general trend in the number of certificates issued in these cities was downward, although the numbers fluctuated from year to year depending upon business conditions. In 1920 the number of certificates issued in these 13 cities was higher than in any subsequent year. The postwar boom was followed by a decline in 1921 and 1922. A sharp revival in 1923, when in two cities even the 1920 figures were exceeded, was followed by a decrease in 1924. In 1925 an upward swing began which reached another peak in 1926, somewhat lower than that of 1923. Again there were recessions in 1927 and 1928, but in the first half of 1929 a sharp rise occurred which was checked by the crash in the business world. Heavy declines occurred in the number of children going to work in each of the 13 cities between 1929 and 1931.

For the last five years of this period, 1927-1931, more complete information as to the number of certificates issued is available; 40 representative cities of 100,000 population or more³ reported for each year. Table 1 shows the change that has taken place in these cities in the rate of issuance of these certificates per 10,000 children aged 14 and 15 in the population:

TABLE 1.—TREND IN RATE OF ISSUANCE OF EMPLOYMENT CERTIFICATES TO CHILDREN 14 AND 15 YEARS OF AGE, 1927 TO 1931

Year	Certificates issued	
	Rate per 10,000 children of 14 and 15 years of age	Per cent of increase or decrease in rate
1927.....	972	
1928.....	889	-8.5
1929.....	924	+3.9
1930.....	617	-33.2
1931.....	459	-25.6

These rates show conclusively that the trend in the employment of 14 and 15 year old children, at least in urban occupations, was sharply altered by the business depression which began to affect employment in the middle of 1929. A gradual tendency to decline which had been proceeding as the former statistics showed since 1920, with decided upward peaks in years of business activity, was turned into a precipitous drop.

Whether the trend, which is apparently still continuing downward, will be permanent, it is too early to say. As recently as 1929 the legislation and practices in force were not able to keep down the number of children going to work in the face of an increasing demand for child labor. Unless there is further strengthening of the child labor and school attendance laws, an increase in employment opportunities will again draw children into industry in large numbers.

The effect of legislation and the influence of social efforts toward prolonging school training for adolescents is forcibly brought out by the differences in rates of employment of 14 and 15 year old children in 34 representative cities. (Table 2.) Although comparison of rates between cities is open to the objection that rates are influenced

³ Atlanta, Baltimore, Bridgeport, Buffalo, Chattanooga, Chicago, Denver, Detroit, Erie, Fort Wayne, Grand Rapids, Indianapolis, Kansas City, Knoxville, Los Angeles, Louisville, Lowell, Lynn, Milwaukee, Minneapolis, Nashville, New Haven, New York City, Oakland, Omaha, Peoria, Philadelphia, Pittsburgh, Providence, Rochester (N. Y.), St. Paul, Salt Lake City, San Francisco, Scranton, South Bend, Somerville, Washington (D. C.), Wichita, Wilmington, Yonkers.

by differences in the type of occupations covered, by the certificating provisions, and by the thoroughness with which the law is enforced, nevertheless the wide variations in each year indicate the possibility of decreasing child labor in spite of an active demand. The relatively low rates in Minneapolis, San Francisco, Chicago, and Detroit, for instance, must indicate that these cities are exercising more effective means of control than are Fall River, Lowell, New York, or Providence.

TABLE 2.—NUMBER OF CHILDREN 14 AND 15 YEARS OF AGE RECEIVING FIRST REGULAR EMPLOYMENT CERTIFICATES PER 10,000 ESTIMATED POPULATION OF THESE AGES IN CITIES OF 100,000 OR MORE POPULATION REPORTING, 1927 TO 1931

City	1927	1928	1929	1930	1931
Baltimore, Md.	1,426	1,171	1,390	881	563
Boston, Mass.	(1)	948	1,120	714	527
Bridgeport, Conn.	1,111	1,181	1,657	747	831
Buffalo, N. Y.	1,365	1,238	1,395	1,081	859
Chicago, Ill.	400	320	313	100	43
Denver, Colo.	260	287	254	222	88
Detroit, Mich.	160	221	215	126	43
Erie, Pa.	662	304	318	221	102
Fall River, Mass.	(1)	(1)	2,589	1,695	2,054
Grand Rapids, Mich.	326	284	338	111	54
Indianapolis, Ind.	231	179	201	98	75
Kansas City, Kans.	180	196	297	157	65
Knoxville, Tenn.	494	261	505	221	182
Los Angeles, Calif.	315	248	286	171	101
Louisville, Ky.	585	439	530	247	161
Lowell, Mass.	638	840	1,277	918	1,000
Lynn, Mass.	809	821	969	460	438
Milwaukee, Wis.	956	685	447	182	111
Minneapolis, Minn.	91	80	64	64	40
New Haven, Conn.	1,643	1,581	1,429	860	879
New York, N. Y.	1,688	1,587	1,627	1,211	969
Omaha, Nebr.	179	103	109	125	134
Philadelphia, Pa.	1,584	1,524	1,613	977	629
Pittsburgh, Pa.	602	417	594	323	196
Providence, R. I.	1,830	1,961	2,198	1,466	1,245
Rochester, N. Y.	1,467	1,407	1,268	864	503
St. Paul, Minn.	173	154	128	74	50
Salt Lake City, Utah.	195	247	178	120	54
San Francisco, Calif.	112	94	100	72	41
Somerville, Mass.	857	801	897	495	351
Scranton, Pa.	1,185	1,161	1,245	849	801
Washington, D. C.	150	201	221	242	151
Wilmington, Del.	841	829	921	584	425
Yonkers, N. Y.	1,074	909	847	735	443

¹ No report.

First Regular Employment Certificates Issued in 1931

Number of Children 14 and 15 Years of Age

IN 1931 the industrial depression affected work opportunities for children as well as for adults, but 66,634 boys and girls, 14 and 15 years of age, received regular certificates for the first time during the year in the cities ⁴ and States ⁵ reporting to the Children's Bureau. In addition, a total of 12,225 regular certificates were issued in places ⁶ where, as no provision is made for special certificates for vacation and after-school work, some of the regular permits were undoubtedly issued to children who did not leave school immediately upon going to work. Comparable information for localities reporting for each of the past three years, 1929 to 1931, showed a decrease in the number of 14 and 15 year old children to whom first regular certificates were issued of 23 per cent in 1931 from the preceding year, following a decrease of 34 per cent in 1930 as compared with 1929.

⁴ 35 cities with population of 50,000 or more in 10 States.

⁵ State-wide reports for 20 States and the District of Columbia.

⁶ 3 States and 1 city.

TABLE 3.—NUMBER OF CHILDREN 14 AND 15 YEARS OF AGE RECEIVING FIRST REGULAR EMPLOYMENT CERTIFICATES IN 1930 AND 1931 AND PER CENT OF CHANGE AS COMPARED WITH PREVIOUS YEAR (STATES AND CITIES OF 50,000 POPULATION AND OVER REPORTING¹)

State and city	1930		1931	
	Number	Per cent of change as compared with 1929 ²	Number	Per cent of change as compared with 1930 ³
<i>States reporting</i>				
Alabama.....	466		263	-44
Birmingham.....	103		33	-68
Mobile.....	76		28	-63
Montgomery.....	24		33	
Arkansas.....			99	
Little Rock.....			30	
Connecticut.....	3,401	-48	3,479	+2
Bridgeport.....	423	-54	469	+11
Hartford.....	308	-45	195	-37
New Britain.....	120	-53	161	+34
New Haven.....	541	-39	551	+2
Waterbury.....	181	-52	162	-10
District of Columbia.....	309	+11	194	-37
Georgia.....	861		496	-42
Atlanta.....	16		14	
Illinois.....			786	
Chicago.....	1,143	-67	504	-56
Decatur.....	26	-70	14	
East St. Louis.....	62	-37	28	-55
Oak Park.....	1		2	
Peoria.....	24	-67	6	
Rockford.....	9	-82	4	
Springfield.....	52	-61	9	-83
Indiana.....	422	-49	273	-35
Fort Wayne.....	31	-60	8	
Hammond.....	15		20	
Indianapolis.....	104	-50	80	-23
South Bend.....	34	-44	17	
Iowa.....	3,404	-53	3,204	-50
Cedar Rapids.....	3,111		3,333	
Davenport.....	3,866	-45	3,499	-43
Des Moines.....	3,922	-50	3,400	-57
Sioux City.....	3,477	-58	3,299	
Kansas.....	93	-45	45	-52
Kansas City.....	67	-46	28	-58
Topeka.....	12		2	
Wichita.....	3		1	
Kentucky.....	420	-47	259	-38
Covington.....	33		13	
Louisville.....	230	-52	149	-35
Maine.....	4,112	-34	4,499	-56
Portland.....	4,266		4,333	
Maryland.....	2,412	-37	2,138	-32
Baltimore.....	2,277	-36	2,466	-36
Massachusetts.....	8,249		6,856	-17
Boston.....	1,838	-35	1,359	-26
Fall River.....	776	-34	940	+21
Lawrence.....	353	-20	417	+18
Lowell.....	336	-28	366	+9
Lynn.....	161	-52	153	-5
Somerville.....	168	-44	120	-29
Springfield.....	252	-41	139	-45
Minnesota.....	183	-28	118	-36
Minneapolis.....	96	+3	61	-36
St. Paul.....	66	-41	45	-32
New Hampshire.....	6,708	-37	6,526	-26
Manchester.....	6,236	-43	6,242	+3
New Jersey.....	11,797	-32	11,005	-7
Jersey City.....	3,816	-40	3,564	-31
Newark.....	7,137	-39	7,959	-30
Trenton.....	3,508	-38	3,376	-26
New York.....	42,046	-23	33,691	-20
Albany.....	288	-20	222	-23
Binghamton.....	259	-3	247	-5
Buffalo.....	2,206	-21	1,768	-20

¹ Population according to 1930 census. Figures from State or local official sources.

² Per cent not shown where number of children is less than 50, nor where figures for previous year are not available or not comparable.

³ Includes children to whom regular certificates were issued for work outside school hours and during vacation.

⁴ Includes only 15-year-old children; law does not permit the issuance of regular certificates to children under 15. In some of these cities a few certificates were issued to children of 14 under special circumstances.

⁵ Exclusive of 132 children in 1930 and 108 children in 1931 to whom "vocational" certificates were issued.

⁶ Includes children to whom regular certificates were issued for "after-school" work.

⁷ Includes children to whom regular certificates were issued for work during vacation.

TABLE 3.—NUMBER OF CHILDREN 14 AND 15 YEARS OF AGE RECEIVING FIRST REGULAR EMPLOYMENT CERTIFICATES IN 1930 AND 1931 AND PER CENT OF CHANGE AS COMPARED WITH PREVIOUS YEAR (STATES AND CITIES OF 50,000 POPULATION AND OVER REPORTING)—Continued

State and city	1930		1931	
	Number	Per cent of change as compared with 1929	Number	Per cent of change as compared with 1930
New York—Continued.				
Mount Vernon.....	126	-----	72	-43
New Rochelle.....	85	-----	67	-21
New York.....	27,319	-24	22,244	-19
Niagara Falls.....	35	-44	25	-----
Rochester.....	1,037	-30	606	-42
Schenectady.....	282	-40	216	-23
Syracuse.....	249	-52	225	-10
Troy.....	178	-11	134	-25
Utica.....	398	-41	333	-16
Yonkers.....	370	-10	228	-38
North Carolina.....	3,546	-45	2,135	-40
Oregon.....	218	-----	311	+43
Pennsylvania.....	16,175	-42	11,971	-26
Erie.....	99	-28	46	-54
Harrisburg.....	54	-50	30	-44
Philadelphia.....	6,442	-38	4,160	-35
Pittsburgh.....	797	-44	484	-39
Scranton.....	524	-31	495	-6
Tennessee.....	793	-48	312	-61
Chattanooga.....	50	-48	38	-24
Knoxville.....	77	-55	65	-16
Memphis.....	146	-39	74	-49
Nashville.....	14	-----	9	-----
Vermont.....	35	-55	34	-----
Washington.....	231	-50	135	-42
Wisconsin.....	739	-55	458	-38
Milwaukee.....	360	-58	223	-38
Cities in States not reporting				
California:				
Long Beach.....	11	-----	10	-----
Los Angeles.....	540	-37	334	-38
Oakland.....	49	-29	25	-----
Pasadena.....	20	-----	10	-----
Sacramento.....	49	-13	25	-----
San Diego.....	28	-----	21	-----
San Francisco.....	108	-26	62	-43
Colorado: Denver.....	188	-11	75	-60
Delaware: Wilmington.....	205	-36	140	-27
Louisiana: New Orleans.....	7 688	-37	7 490	-29
Michigan:				
Detroit.....	4 638	-38	4 225	-65
Grand Rapids.....	4 65	-66	4 32	-51
Hamtramck.....	4 34	-39	4 14	-----
Highland Park.....	4 1	-----	4 4	-----
Jackson.....	0	-----	0	-----
Kalamazoo.....	4 11	-----	4 4	-----
Lansing.....	4 56	-10	4 27	-52
Pontiac.....	4 25	-----	4 12	-----
Saginaw.....	4 33	-----	4 23	-----
Missouri:				
Kansas City.....	127	-----	63	-50
St. Joseph.....	-----	-----	39	-----
St. Louis.....	3 998	-42	511	-----
Springfield.....	-----	-----	36	-----
Nebraska:				
Lincoln.....	3	-----	2	-----
Omaha.....	87	+18	94	+8
Ohio:				
Akron.....	0	-----	4	-----
Cincinnati.....	3	-----	2	-----
Cleveland.....	0	-----	0	-----
Columbus.....	1	-----	5	-----
Dayton.....	4	-----	0	-----
Springfield.....	15	-----	1	-----
Toledo.....	12	-----	4	-----
Youngstown.....	0	-----	0	-----
Rhode Island: Providence.....	1,318	-32	1,123	-15
Utah: Salt Lake City.....	63	-35	29	-54
Virginia: Richmond.....	113	-32	67	-41

¹ Includes children to whom regular certificates were issued for work outside school hours and during vacation.

⁴ Includes only 15-year-old children; law does not permit the issuance of regular certificates to children under 15. In some of these cities a few certificates were issued to children of 14 under special circumstances.

⁷ Includes children to whom regular certificates were issued for work during vacation.

⁸ Children under 16 adjudged incapable of profiting substantially by further instruction.

Age at Going to Work of Children under 16

All the States from which reports for 14 and 15 year old children were received require a child to be at least 14 years of age before he may obtain a regular employment certificate. The laws of Maine, Michigan, and Rhode Island fix the minimum age at 15, and in Ohio a child of normal intelligence must be at least 16 before he is allowed to leave school for full-time employment.

Reports as to the age at which children under 16 obtained certificates were not given for all localities. However, among 51,813 boys and girls for whom this information was available, 28 per cent started to work at 14 years of age in 1931. In a comparable group of States and cities reporting in each year from 1929 to 1931, the proportion of children going to work at 14 decreased from 30 per cent to 27 per cent. This indicates a slightly greater decline in the employment of younger than of older children.

Localities vary greatly in the proportion of certificates issued to 14-year-old children. In 1931 in one State as high as 70 per cent of the children going to work were only 14 years of age; in a number of other States and cities more than half the certificates were issued to children 14 years old. Where a high grade requirement is in force for 14-year-old children, the number going to work will, of course, tend to be smaller than in States where the educational requirement is low. For instance, where the law required children of 14 to have completed the eighth grade before going to work, only 21 per cent of the certificates were issued to children of 14; where exemptions to such a provision were permitted, a somewhat higher proportion, 27 per cent, were issued to children of that age; where completion of the eighth grade was not required, 51 per cent of the certificated children went to work at 14.

Number of Minors 16 and 17 Years of Age

Reports for the number of 16 and 17 year old boys and girls going to work are not nearly so representative of conditions throughout the United States as those for children 14 and 15 years old, because certificates are required for these children in a comparatively small number of States. In some of the States reporting, the certificates represent only those issued to 16-year-old minors, as none are required after age 17 is reached. In 1931, in the 5 States reporting, 34 cities in 7 other States, and the District of Columbia, 55,735 certificates were issued to boys and girls of 16 or 17 years of age. (See Table 4.) Comparable information for 3 years on the number of 16 and 17 year old minors receiving certificates showed a decrease from 1929 to 1930 amounting to 27 per cent, whereas the decrease in 1931 from 1930 was only 18 per cent. Eight cities reported increases in this age group in 1931 over 1930 varying from 2 per cent in New Orleans to 74 per cent in Akron.⁷ Ten cities showed a decrease of 10 per cent or less, whereas seven cities showed a decrease of more than 40 per cent.

⁷ This increase in Akron was due in large part to an increase in the number of girls entering domestic service.

TABLE 4.—NUMBER OF MINORS 16 AND 17 YEARS OF AGE RECEIVING FIRST REGULAR EMPLOYMENT CERTIFICATES IN 1930 AND 1931, AND PER CENT OF CHANGE AS COMPARED WITH PREVIOUS YEAR (STATES AND CITIES OF 50,000 POPULATION AND OVER REPORTING ¹)

State and city	1930		1931	
	Number	Per cent of change as compared with 1929 ²	Number	Per cent of change as compared with 1930 ³
<i>States reporting</i>				
Alabama.....	3 1,034		3 821	-21
Birmingham.....	3 176		3 36	-80
Mobile.....	3 80		3 56	-30
Montgomery.....	3 25		3 31	
District of Columbia.....	1,898	+3	1,763	-7
New York.....	3 22,878	-23	3 19,764	-14
Albany.....	3 222	-28	3 217	-2
Binghamton.....	3 205	-24	3 176	-14
Buffalo.....	3 1,497	-20	3 1,236	-17
Mount Vernon.....	3 149		3 121	-19
New Rochelle.....	3 79		3 87	+10
New York.....	3 15,014	-20	3 13,515	-10
Niagara Falls.....	3 151	-30	3 104	-31
Rochester.....	3 854	-30	3 799	-6
Schenectady.....	3 265	-38	3 162	-39
Syracuse.....	3 160	-56	3 130	-19
Troy.....	3 116	-33	3 104	-10
Utica.....	3 135	-51	3 123	-9
Yonkers.....	3 296	+1	3 240	-19
Oregon.....	895		770	-14
Washington.....	1,103	-49	787	-29
Wisconsin.....	3 2,737	-52	3 1,620	-40
Milwaukee.....	3 1,324	-50	3 778	-41
<i>Cities in States not reporting</i>				
California:				
Los Angeles.....	3,909	-26	2,454	-37
Oakland.....	1,017	-33	925	-9
Pasadena.....			156	
Sacramento.....	226	-29	168	-26
San Diego.....	397	+24	374	-6
San Francisco.....	1,415	-31	1,218	-14
Louisiana: New Orleans.....	4 239	-34	4 244	+2
Massachusetts:				
Boston.....	3,240	-37	2,904	-10
Fall River.....	540	-14	613	+14
Lawrence.....			1,618	
Lowell.....	1,207		1,318	+2
Lynn.....	300		344	+15
Somerville.....	583	-40	650	+11
Michigan:				
Detroit.....	5,110		3,296	-35
Grand Rapids.....	494	-50	371	-25
Hamtramck.....	394	-32	333	-15
Highland Park.....	184	-49	129	-30
Jackson.....	89		44	-51
Kalamazoo.....	103	-55	73	-29
Lansing.....	278		186	-33
Pontiac.....	199		108	-46
Saginaw.....	251	-63	112	-55
Ohio:				
Akron.....	370	-64	643	+74
Cincinnati.....	3 2,190		1,648	
Cleveland.....	8,572	-2	7,043	-18
Columbus.....	767	-36	598	-22
Dayton.....	467	-42	455	-3
Springfield.....	260	-40	213	-18
Toledo.....	1,111	-41	715	-36
Youngstown.....	966	-6	751	-22
Tennessee:				
Chattanooga.....			35	
Knoxville.....	91		48	-47
Nashville.....	172		144	-16
Utah: Salt Lake City.....	524	+7	279	-47

¹ Population according to 1930 census. Figures from State or local official sources.

² Per cent not shown where number of minors is less than 50, nor where figures for previous year are not available or not comparable.

³ Number of 16-year-old minors to whom regular certificates were issued; law does not require certificates for minors over 16 years of age.

⁴ Number of girls to whom regular certificates were issued; law does not require certificates for boys of these ages.

⁵ Information received in 1932 indicates 1930 figures included vacation and out-of-school certificates and cooperative certificates.

Education of Children Going to Work

14 and 15 year old children.—Some of the most important information revealed by the employment-certificate statistics is the education attained by these young workers. Seldom do these boys and girls return to regular day school; as far as education is concerned, therefore, their equipment for citizenship is to a large extent, measured by the training they have received before they get their employment certificates. The amount of education received is determined largely by the grade requirement fixed in the child labor law of the State. Of the 54,493 children for whom this information was furnished in 1931, 32,601 (60 per cent) had completed the eighth or a higher grade; 12,005 (22 per cent) had gone no farther than completion of the sixth grade, many stopping with the fourth or fifth. Those who had completed the eighth grade were concentrated in places where this requirement had to be met before a certificate could be obtained.

In addition to standards actually set up in the law and the extent of enforcement of these standards and of the compulsory school attendance provisions, local and racial customs as to leaving school for work as soon as the legal minimum age has been reached, also play an important part. Wide variations in States and even in cities in the same State reflect the play of these different factors and influences.

In 1931, the percentage of children who had advanced at least as far as completion of the eighth grade before going to work ranged from 17 to 100 in the various cities and States; and the percentage who had received less than a seventh-grade education varied from 0 to 62. It is significant that in all except one of the cities in which 80 per cent or more of the children completed the eighth grade, the law prescribes completion of the eighth grade for 14-year-old children as a condition of employment.⁸

In the whole group of States and cities that have reported the grade completed for each of the past five years the percentage of children 14 and 15 years of age who have completed the eighth or a higher grade has increased from 60 in 1927 to 65 in 1931. This increase reflects not only higher legal standards but also a tendency for children voluntarily to stay in school longer. The record of each locality year by year is shown in Table 5.

In the localities that reported the grades completed by boys and girls separately, a larger proportion of the girls than of the boys (63 per cent of the former as compared with 59 per cent of the latter) had completed the eighth or some higher grade in 1931.

⁸ In some of the localities minor exceptions to the eighth-grade requirement are permitted.

TABLE 5.—PERCENTAGE OF CHILDREN 14 AND 15 YEARS OF AGE RECEIVING FIRST REGULAR EMPLOYMENT CERTIFICATES WHO COMPLETED EIGHTH OR HIGHER GRADE, CLASSIFIED ACCORDING TO MINIMUM LEGAL SCHOOL STANDARD, 1927-1931 (STATES AND CITIES OF 50,000 POPULATION AND OVER REPORTING)

Minimum legal standard	Percentage of children 14 and 15 years of age receiving first regular employment certificates completing eighth or higher grade in—				
	1927	1928	1929	1930	1931
<i>Eighth grade for children 14 and 15</i>					
Illinois.....	(1)	(1)	(1)	(1)	100
Chicago.....	66	70	84	100	100
3 other cities (East St. Louis, Peoria, Springfield).....	60	65	78	100	(1)
Indiana.....	100	100	100	100	100
Kansas.....	92	88	96	91	(1)
Minnesota.....	100	100	100	99	99
<i>Eighth grade, with exemptions, for children 14 and 15</i>					
Delaware: Wilmington.....	77	67	68	59	70
District of Columbia.....	97	94	95	98	99
Maine ¹	70	100	100	98	(1)
Nebraska: Omaha.....	(1)	(1)	(1)	56	(1)
Rhode Island: Providence ²	(1)	44	46	44	53
Utah: Salt Lake City.....	(1)	(1)	(1)	76	(1)
Vermont.....	(1)	34	26	(1)	(1)
Wisconsin.....	82	85	100	91	88
Milwaukee.....	83	87	100	92	90
<i>Eighth grade for children 14 only</i>					
California: 3 cities (Los Angeles, Sacramento, San Francisco).....	74	69	85	86	83
New York:					
New York City.....	67	69	72	70	73
4 other cities (Buffalo, Niagara Falls, Rochester, Yonkers).....	62	61	61	61	62
6 other cities (Albany, Binghamton, Schenectady, Syracuse, Troy, Utica).....	(1)	(1)	56	48	50
<i>Less than eighth grade for children 14 and 15</i>					
Alabama.....	27	32	(1)	32	22
Arkansas.....	(1)	(1)	(1)	(1)	70
Colorado: Denver.....	58	47	41	56	51
Connecticut.....	57	57	56	52	50
Kentucky.....	36	(1)	37	32	37
Maryland: Baltimore.....	35	35	32	34	35
Massachusetts:					
Boston.....	(1)	58	56	61	61
4 other cities (Fall River, Lowell, Lynn, Somerville).....	(1)	(1)	38	40	39
Michigan:					
Detroit ³	58	53	60	80	63
3 other cities (Grand Rapids, Hamtramck, Lansing) ⁴	(1)	(1)	67	69	66
Missouri:					
Kansas City.....	75	79	(1)	80	86
St. Louis.....	49	51	(1)	(1)	55
North Carolina.....	(1)	(1)	15	13	17
Pennsylvania:					
Philadelphia.....	31	34	37	38	39
4 other cities (Erie, Harrisburg, Pittsburgh, Scranton).....	38	39	41	39	44
Virginia: Richmond.....	(1)	(1)	27	26	27

¹ Not reported.

² No eighth-grade requirement before July 1, 1929.

³ Per cent not shown because number of children was less than 50.

⁴ Percentages are for number of 15-year-old children to whom regular certificates were issued. Law does not permit the issuance of regular certificates to children under 15 years of age. In 19 instances in Michigan cities other than Detroit, certificates were issued to children of 14 years in 1928, 1929, and 1930.

⁵ No eighth-grade requirement before 1928.

16 and 17 year old children.—Reports available on the educational attainments of 37,321 boys and girls of 16 and 17 leaving school for work show that 75 per cent had completed the eighth grade at least as compared with 60 per cent of the 14 and 15 year old children. Only 14 per cent had advanced no further than completion of the sixth grade—a distinct improvement over the 22 per cent reported in the corresponding group of younger workers.

Sex of Children Going to Work

In the States and cities that reported in each of the 5 years, 1927-1931, the percentage distribution of boys and girls 14 and 15 years of age is found to be remarkably steady until 1931 when there was a considerable increase in the proportion of girls.

TABLE 6.—SEX DISTRIBUTION OF CHILDREN 14 AND 15 YEARS OF AGE, GIVEN EMPLOYMENT CERTIFICATES, 1927-1931

Year	Per cent of employment certificates issued to—	
	Boys	Girls
1927.....	57	43
1928.....	57	43
1929.....	56	44
1930.....	55	45
1931.....	50	50

Between 1927 and 1930 the proportion of boys in each year exceeded that of girls by 10 to 14 per cent. In 1930, 55 per cent of the children going to work were boys, a sex distribution that is practically the same as that shown by the 1930 census for this age group in nonagricultural occupations. In 1931, however, the employment-certificate figures show girls entering employment in practically the same numbers as boys, the boys having declined in number more sharply than the girls. This change may be due to a shift in the employment of young children from manufacturing and mercantile industries, which employ mostly boys, to other types of employment, noted below, particularly domestic service, in which more girls than boys are employed.

Among the 16 and 17 year old workers, the proportion of girls has been increasing from year to year until in 1931 the numbers going to work were approximately the same for both sexes.

Occupations Entered by Children on First Going to Work

A survey of the occupations entered by the two groups of children, 14 and 15 year olds and 16 and 17 year olds, over a 5-year period reflect a growing scarcity of employment opportunities in the manufacturing and mechanical industries and an increase in openings in domestic and personal service.

Occupations of 14 and 15 year old children.—The percentage distribution by occupational groups for the 14 and 15 year old children for the years 1927-1931 shows this trend.

TABLE 7.—PERCENTAGE DISTRIBUTION OF 14 AND 15 YEAR OLD CHILDREN RECEIVING EMPLOYMENT CERTIFICATES, BY OCCUPATIONAL GROUPS, 1927-1931

Year	Per cent of children receiving employment certificates in—					
	Manufacturing and mechanical occupations	Mercantile occupations	Domestic and personal service	Messenger and delivery service	Other occupations	All occupations
1927.....	39	21	14	16	11	100
1928.....	35	17	18	17	13	100
1929.....	38	17	14	17	14	100
1930.....	30	19	23	17	11	100
1931.....	30	17	29	14	10	100

Another indication of this shift is found in a comparison of the decrease in the numbers of children of 14 and 15 entering each occupational group between 1929 and 1931. The actual number going to work in the places for which this information was obtained was 59 per cent less in 1931 than in 1929. The decrease in numbers entering manufacturing and mechanical industries was 68 per cent as compared with a decrease of only 18 per cent in the number entering domestic and personal service.

Occupations of 16 and 17 year old minors.—The boys and girls of 16 and 17 showed an even more decided tendency than the younger group to shift from manufacturing and mechanical occupations to domestic and personal service. In 1927, 47 per cent of the employment certificates issued to this age group in localities reporting this information were for manufacturing and mechanical industries, and in 1931 only 21 per cent; in the same years the proportion entering domestic and personal service rose from 16 per cent to 42 per cent. The proportion entering mercantile occupations and those entering public messenger and delivery work remained about stationary while the proportion employed in offices declined from 7 per cent to 3 per cent.

Evidence of Age

The keystone of child labor law enforcement is the evidence of age required, for unless this can be depended upon, children under the legal age will undoubtedly be permitted to go to work. Birth certificates, which in the best certificate laws are given preference as evidence, and baptismal certificates, which usually rank second, furnish the proof of age for 85 per cent of the 73,380 certificates for which this information was reported. In 5 States and 19 cities between 90 and 100 per cent of all certificates were issued on these two types of evidence. On the other hand, in 2 States and 4 cities less than 10 per cent of the children who obtained certificates offered birth certificates or baptismal certificates as proof of their ages, and in some places none of the children going to work presented either of these kinds of evidence. The school record of age was the predominating type of evidence accepted in 2 States and 13 cities, and in 1 State and 3 cities parents' affidavits were accepted as proof of age for all children receiving employment certificates. This is the most unsatisfactory type of evidence, for experience has shown that many parents will misstate age in order to get their children jobs.

Value of Employment-Certificate Reports

THE value of these employment-certificate reports may be expected to increase in the future, as it has increased during the past decade, owing to more careful reporting by the officers cooperating with the Children's Bureau. Through visits to local and State officials, through cooperation with them in the formulation of uniform methods of record keeping and reporting, and through persistent efforts to educate officials and the public to realize the value of such records, much more comprehensive annual surveys in this field are now possible than could be made 10 years ago. Advances in legislative standards for the administration of child labor laws have also assisted in bringing about this result. For 1920, reports were obtained for only 33 cities in 18 States and the District of Columbia; for 1931,

reports either for the entire State or for certain cities were received from 34 States and the District of Columbia, including in all 105 city reports. In 1931 state-wide reports were obtained from half the 48 States.

In addition, many of the difficulties that kept the figures from being comparable have been eliminated. All the statistics used are now reported for the calendar year and are for "first regular certificates"; that is, those issued to children going to work for the first time and permitting them to leave school for work.

Though the system of reporting is even yet by no means complete, the States and cities now cooperating with the bureau are representative of all the different sections of the country. They employed, according to the 1930 census, about three-fourths of the total number of working boys and girls of 14 and 15 years in the country at work in the occupations for which certificates are usually required. Certain child labor laws do not designate a central State authority to receive records of certificates issued by local authorities. In these States reports are not available for the State as a whole, and the Children's Bureau must rely upon the cooperation of local offices; reports are received from perhaps only a few cities in the State. In some States legal machinery exists but lack of sufficient funds or staff prevents adequate supervision of local certificate issuing officers. Everywhere the value of the statistics is dependent upon the careful and consistent attention of these officers, many of whom are overburdened with other duties.

These reports can not give a complete picture of the varying stream of children entering industry each year. For instance, they show only the numbers going to work legally; they give no indication of the numbers going to work without receiving certificates as required by law. Factory-inspection reports are not sufficiently complete to give an exact picture of the extent to which children enter employment without certificates, but it is known that a considerable number do so.

Besides the children illegally employed, there is another large group of working children for whom no record is obtainable for intercensal years. These are the children who enter occupations for which employment certificates are not required—for instance, agricultural pursuits and in many places domestic service and street trades.

Although limited in scope, these annual statistics of employment certificates have real value. Not only do they furnish practically the only source, between the years of the decennial census, of general and comparable information indicating the trend in the employment of children, but they also give information not obtainable elsewhere on other important aspects of child labor, such as the age children go to work, their educational equipment, and the occupations that they enter.

Child Workers in the United States, 1930

THE following tables on child workers were taken from more comprehensive tabulations in the United States Summary of Occupation Statistics, Fifteenth Census of the United States, 1930.

From Table 1, showing the number and proportion of children 10 to 17 years old gainfully occupied in the United States in 1920 and 1930, it will be noted that the total number of these children in 1930 was 2,145,959—a decrease of 627,547, or 22.6 per cent, as compared with 1920. In 1930, 11.3 per cent of the children of these ages were gainfully occupied; in 1920 the proportion was 17 per cent.

The decline in the younger age groups of the proportion of gainfully occupied children to the total number of children in such groups is marked. In 1920, of the children 10 to 13 years of age, 4.4 per cent were gainfully occupied; in 1930 the percentage was 2.4. In 1920 the gainfully occupied children 14 years of age formed 12.6 per cent of the total children of that age, in 1930 the corresponding percentage was 6.6.

TABLE 1.—NUMBER OF CHILDREN 10 TO 17 YEARS OLD GAINFULLY OCCUPIED, AND PER CENT OF TOTAL CHILDREN IN EACH AGE GROUP GAINFULLY OCCUPIED, 1920 AND 1930

Age	Gainfully occupied children								
	Male		Female		Total		Per cent distribution		
	Number	Per cent	Number	Per cent	Number	Per cent	Male	Female	Total
1920									
10 to 13 years.....	258,259	6.0	119,804	2.8	378,063	4.4	14.2	12.5	13.6
14 years.....	174,683	16.9	82,911	8.2	257,594	12.6	9.6	8.7	9.3
15 years.....	281,306	30.4	143,895	15.4	425,201	22.8	15.5	15.1	15.3
16 years.....	501,134	51.3	277,823	27.9	778,957	39.5	27.6	29.1	28.1
17 years.....	602,322	65.0	331,369	35.7	933,691	50.3	33.1	34.7	33.7
10 to 17 years.....	1,817,704	22.2	955,802	11.8	2,773,506	17.0	100.0	100.0	100.0
1930									
10 to 13 years.....	162,260	3.3	73,068	1.5	235,328	2.4	11.4	10.1	11.0
14 years.....	110,839	9.2	46,821	4.0	157,660	6.6	7.8	6.5	7.3
15 years.....	187,643	16.3	86,487	7.6	274,130	11.9	13.2	12.0	12.8
16 years.....	386,511	32.7	201,306	17.0	587,817	24.8	27.1	27.9	27.4
17 years.....	577,983	49.9	313,041	27.5	891,024	38.8	40.6	43.4	41.5
10 to 17 years.....	1,425,236	14.9	720,723	7.7	2,145,959	11.3	100.0	100.0	100.0

Table 2 records the percentage distribution of gainfully occupied children 10 to 17 years of age in the general occupational divisions in 1930. One of the outstanding facts brought out by these statistics is the large proportion of child workers 10 to 14 years of age in agriculture, the percentages being 87.4 for the child workers 10 to 13 years of age and 72.1 for such workers 14 years old.

Another conspicuous fact disclosed by this tabulation is the great decrease in the proportion of girl agricultural workers in the older age groups, the girls 16 and 17 years of age in agricultural occupations constituting, respectively, 18.7 and 11.3 per cent of the girl workers of these ages, while the girls from 10 to 13 years old in agriculture constitute 90.1 per cent of the girl workers in their age group.

It will also be noted that 27.3 per cent of the girl workers 10 to 17 years of age and only 18.9 per cent of the boy workers of the same age group are in the manufacturing and mechanical industries.

TABLE 2.—PER CENT DISTRIBUTION, BY GENERAL DIVISIONS OF OCCUPATIONS, OF GAINFULLY OCCUPIED CHILDREN OF EACH SEX, 10 TO 17 YEARS OLD, 1930

Sex and occupation group	Per cent distribution ¹					
	10 to 13 years	14 years	15 years	16 years	17 years	10 to 17 years
MALES						
Agriculture.....	86.1	76.1	63.4	49.9	41.6	54.5
Forestry and fishing.....	.1	.4	.5	.6	.6	.5
Extraction of minerals.....	.1	.2	.4	1.6	2.1	1.4
Manufacturing and mechanical industries.....	2.2	6.6	13.0	21.3	26.2	18.9
Transportation and communication.....	.3	1.6	3.1	4.5	5.5	4.0
Trade.....	8.7	9.9	10.2	9.8	9.7	9.7
Public service (not elsewhere classified).....	.1	.1	.1	.2	.6	.3
Professional service.....	.5	.9	1.2	1.4	1.6	1.3
Domestic and personal service.....	1.5	2.3	2.9	3.3	3.6	3.1
Clerical occupations.....	.4	2.0	5.1	7.3	8.6	6.3
All occupations.....	100.0	100.0	100.0	100.0	100.0	100.0
FEMALES						
Agriculture.....	90.1	62.6	36.1	18.7	11.3	27.7
Forestry and fishing.....						
Extraction of minerals.....	1.7	15.1	28.6	33.5	30.8	27.3
Manufacturing and mechanical industries.....	.1	.2	.5	2.6	3.9	2.5
Transportation and communication.....	.8	2.0	4.4	7.8	9.2	6.9
Trade.....						
Public service (not elsewhere classified).....	.2	.3	.6	1.0	2.1	1.3
Professional service.....	6.8	18.5	25.5	26.5	24.3	22.9
Domestic and personal service.....	.1	1.3	4.2	9.9	18.4	11.4
Clerical occupations.....						
All occupations.....	100.0	100.0	100.0	100.0	100.0	100.0
BOTH SEXES						
Agriculture.....	87.4	72.1	54.8	39.2	30.9	45.5
Forestry and fishing.....	.1	.3	.3	.4	.4	.3
Extraction of minerals.....	.1	.1	.3	1.1	1.4	.9
Manufacturing and mechanical industries.....	2.0	9.1	17.9	25.5	27.8	21.7
Transportation and communication.....	.2	1.2	2.3	3.8	4.9	3.5
Trade.....	6.3	7.5	8.4	9.1	9.5	8.8
Public service (not elsewhere classified).....	.1	.1	.1	.1	.4	.2
Professional service.....	.4	.7	1.0	1.3	1.7	1.3
Domestic and personal service.....	3.2	7.1	10.0	11.3	10.9	9.8
Clerical occupations.....	.3	1.8	4.8	8.2	12.0	8.0
All occupations.....	100.0	100.0	100.0	100.0	100.0	100.0

¹ 10 to 15 year old groups include 402,344 unpaid family workers in agriculture.

The per cent of children 10 to 15 years old gainfully occupied for the last three census years is shown in Table 3, by sex and geographic divisions. In 1910 the percentage of boys of these ages gainfully occupied was 24.8; in 1920, 11.3 per cent; and in 1930, only 6.4 per cent. Of the girls in this age group, 11.9 per cent were gainfully occupied in 1910; 5.6 per cent in 1920; and 2.9 per cent in 1930. For 1910 in the South Atlantic Division 43.6 per cent of the boys and 24.4 per cent of the girls are reported as gainfully occupied and for 1930, 12.9 per cent of the boys and 5.9 per cent of the girls.

TABLE 3.—PER CENT OF CHILDREN 10 TO 15 YEARS OLD GAINFULLY OCCUPIED, 1910 TO 1930, BY SEX AND GEOGRAPHIC DIVISIONS ¹

Division	Per cent gainfully occupied					
	Male			Female		
	1910	1920	1930	1910	1920	1930
New England.....	11.4	9.0	2.4	7.7	6.5	2.0
Middle Atlantic.....	11.5	6.4	2.0	6.8	4.6	1.8
East North Central.....	13.0	6.2	2.1	4.3	2.5	.6
West North Central.....	17.1	6.1	4.1	3.1	1.6	.9
South Atlantic.....	43.6	18.9	12.9	24.4	9.7	5.9
East South Central.....	50.6	23.7	18.2	26.0	11.1	8.7
West South Central.....	40.8	17.2	10.9	20.8	8.2	4.6
Mountain.....	12.8	6.3	4.0	2.6	1.6	1.1
Pacific.....	8.1	5.0	2.2	2.2	1.2	.5
United States.....	24.8	11.3	6.4	11.9	5.6	2.9

¹ Includes 402,344 unpaid family workers in agriculture constituting 60.3 per cent of the group covered by this table.

INDUSTRIAL ACCIDENTS

Coal-Mine Fatalities in the United States and Europe

FIGURES showing comparative accident statistics for coal mines in the United States, Great Britain, France, Belgium, and Prussia were recently published by the United States Bureau of Mines.^a

Compared on the basis of employment, the death rates per thousand 300-day workers in both anthracite and bituminous coal mines in the United States were practically twice as high as the rates in Prussia, from 3½ to 4 times the rates in Great Britain, and from 3½ to 5½ times the rates in France or Belgium. The rates for anthracite mines in Pennsylvania were, however, lower than the combined rates for bituminous-coal mines in the various States.

On the basis of production, the death rates per million tons of coal produced were practically equal for the United States and Great Britain, but 50 per cent higher for France and nearly twice as high for Belgium or Prussia.

Death rates for the five countries are presented in the following table by years, from 1922 to 1930.

COMPARATIVE ACCIDENT STATISTICS FOR COAL MINES IN THE UNITED STATES, GREAT BRITAIN, FRANCE, BELGIUM, AND PRUSSIA¹

[Figures relate to all employees underground and on the surface]

Year	Death rates per thousand full-time (300-day) employees							Death rates per million short tons of coal produced							
	United States			Great Brit-ain	France	Bel-gium	Prus-sia	United States			Great Brit-ain	France	Bel-gium	Prus-sia	
	Bitu-mi-nous mines	An-thra-cite mines	Total					Bitu-mi-nous mines	An-thra-cite mines	Total					
1922	5.16	3.81	4.90	1.18	0.87	0.91	(²)	3.99	5.49	4.16	3.85	5.37	6.07	(²)	
1923	4.65	3.62	4.39	1.23	.97	1.07	(²)	3.46	5.45	3.74	4.08	5.36	6.93	(²)	
1924	5.39	3.39	4.80	1.16	1.03	1.18	(²)	3.94	5.64	4.20	3.90	5.67	7.84	(²)	
1925	4.79	4.12	4.65	1.22	1.24	.90	2.68	3.53	6.47	3.84	4.04	6.68	5.77	9.30	
1926	4.86	3.37	4.50	(²)	1.09	.97	2.38	3.60	5.36	3.83	(²)	5.52	5.71	7.03	
1927	4.60	3.94	4.43	1.35	.98	1.30	2.28	3.36	6.11	3.73	3.89	4.98	7.67	6.62	
1928	4.90	3.85	4.64	1.27	1.12	1.02	2.07	3.45	5.93	3.78	3.61	5.28	5.59	5.74	
1929	4.63	4.24	4.54	1.31	1.15	1.29	2.19	3.19	6.53	3.59	3.61	5.00	6.77	5.68	
1930	5.26	4.22	5.00	1.30	(²)	1.23	3.09	3.46	6.40	3.84	3.60	(²)	6.45	7.77	
	Production per death (thousands of short tons)							Average productivity (short tons) per man per day							
	United States	Great Britain	France	Belgium	Prussia	United States	Great Britain	France	Belgium	Prussia	United States	Great Britain	France	Belgium	Prussia
1922	251	182	240	259	186	165	(²)	4.31	2.31	3.92	1.02	0.54	0.50	(²)	(²)
1923	289	183	267	245	186	144	(²)	4.48	2.21	3.91	1.00	.60	.52	(²)	(²)
1924	254	177	238	257	176	127	(²)	4.56	2.00	3.81	.99	.60	.50	(²)	(²)
1925	284	155	260	247	150	173	107	4.52	2.12	4.04	1.01	.62	.52	1.03	(²)
1926	278	186	261	226	181	175	142	4.50	2.09	3.92	(²)	.66	.56	1.20	(²)
1927	297	164	268	257	201	130	151	4.55	2.15	3.96	1.15	.65	.57	1.23	(²)
1928	290	169	265	277	190	179	174	4.73	2.17	4.10	1.18	.71	.61	1.29	(²)
1929	314	153	278	277	200	148	176	4.85	2.17	4.21	1.21	.76	.64	1.37	(²)
1930	289	156	260	277	(²)	155	129	5.06	2.20	4.33	1.20	(²)	.63	1.44	(²)

¹ Compiled from data published in official reports of countries mentioned.

² Figures incomplete or not available.

^a United States. Department of Commerce. Bureau of Mines. Coal-mine fatalities in August, 1932, by W. W. Adams and L. Chenoweth. Washington, 1932. (Mimeographed.)

Coal-Mine Accidents in the United States, 1930

STATISTICS of accidents in coal mines in 1930, published by the United States Bureau of Mines in its Bulletin No. 355, present for the first time a compilation of nonfatal injuries in the coal-mining industry of the United States.

The accidents during the year resulted in 2,063 fatalities, 122 permanent total disabilities, 2,606 permanent partial disabilities, and 101,093 temporary disabilities, a total of 105,884 injuries.

The number of workers decreased from 654,494 in 1929 to 644,006 in 1930, and the average days of operation decreased from 221 in 1929 to 192 in 1930. The total number of deaths decreased from 2,187 in 1929 to 2,063 in 1930, a reduction of 6 per cent, but as the total number of man-hours worked decreased from 1,168,551,400 in 1929 to 1,002,691,781 in 1930, a reduction of 14 per cent, the number of deaths per million man-hours worked increased from 1.87 in 1929 to 2.06 in 1930. The death rate per million tons of coal mined also shows an increase, from 3.59 in 1929 to 3.84 in 1930, which is the highest rate for the last five years.

It is pointed out that the coal mines in Texas and Alaska were operated without a single fatality during the year, and that the lowest nonfatal injury rate was established by Alaska.

Table 1 shows the number of workers employed, days worked, number of fatalities, and production per man, by 5-year periods from 1906 to 1930, and by years from 1926 to 1930.

TABLE 1.—NUMBER OF WORKERS, NUMBER OF FATALITIES, AND PRODUCTION IN COAL MINES, 1906 TO 1930

Period or year	Men employed		Average days active	Men killed		Production per death (short tons)	Average production per man		Deaths per million tons
	Actual number	Equivalent 300-day workers		Number	Rate per 1,000 300-day workers		Tons per year	Tons per day	
1906-1910 (average) ¹	675,067	484,454	215	2,658	5.49	169,719	668	3.10	5.89
1911-1915 (average).....	739,169	541,489	220	2,517	4.65	210,253	716	3.26	4.76
1916-1920 (average).....	760,381	599,781	237	2,419	4.03	258,944	824	3.48	3.86
1921-1925 (average).....	811,803	484,071	179	2,215	4.58	252,346	689	3.85	3.96
1926-1930 (average).....	699,908	485,139	208	2,235	4.62	266,521	853	4.10	3.75
1926.....	759,033	559,426	221	2,518	4.50	261,241	867	3.92	3.83
1927.....	759,177	503,065	199	2,231	4.43	267,978	788	3.96	3.73
1928.....	682,831	468,680	206	2,176	4.64	264,749	844	4.10	3.78
1929.....	654,494	481,545	221	2,187	4.54	278,380	930	4.21	3.59
1930.....	644,006	412,979	192	2,063	5.00	260,257	834	4.33	3.84

¹ Figures for 1906 to 1909, inclusive, are only for States under inspection service. Figures for 1909 as to average days active were estimated by the Bureau of Mines.

There were 1,939 fatal and 94,536 nonfatal injuries in underground operations in 1930, 95 fatal and 7,584 nonfatal injuries in surface operations, and 29 fatal and 1,701 nonfatal injuries in shaft or open-cut operations. Falls of roof or face accounted for 1,083 of the underground deaths and 28,674 of the underground nonfatal injuries. The next principal cause of underground injuries was mine cars or locomotives, responsible for 285 deaths and 21,307 nonfatal injuries.

The difference in fatality rates for bituminous mines and anthracite mines is shown in Table 2, which contains rates for each type and for both types combined, by 5-year periods from 1891 to 1930, and by years from 1926 to 1930.

TABLE 2.—FATALITY RATES FOR COAL MINES, 1891 TO 1930¹

[Includes underground and surface accidents]

Period or year	Bituminous mines			Anthracite mines			All mines		
	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined
1891-1895 (average)	2.69	4.02	4.84	3.27	4.99	8.12	2.91	4.38	5.87
1896-1900 (average)	2.90	4.06	4.46	3.03	5.58	7.94	2.95	4.50	5.34
1901-1905 (average)	3.49	4.81	5.17	3.36	5.38	7.69	3.45	4.95	5.67
1906-1910 (average)	4.01	5.57	5.50	3.70	5.25	7.67	3.94	5.48	5.89
1911-1915 (average)	3.27	4.75	4.31	3.52	4.37	6.95	3.40	4.65	4.76
1916-1920 (average)	3.05	4.03	3.48	3.70	4.06	6.07	3.18	4.03	3.86
1921-1925 (average)	2.70	4.87	3.67	2.83	3.71	5.80	2.73	4.58	3.96
1926-1930 (average)	3.27	4.84	3.42	2.92	3.90	6.04	3.19	4.61	3.75
1926	3.48	4.86	3.60	2.74	3.37	5.36	3.32	4.50	3.83
1927	2.93	4.60	3.36	2.96	3.94	6.11	2.94	4.43	3.73
1928	3.31	4.90	3.45	2.78	3.85	5.93	3.19	4.64	3.78
1929	3.39	4.63	3.19	3.18	4.24	6.53	3.34	4.54	3.59
1930	3.28	5.26	3.46	2.94	4.22	6.40	3.20	5.00	3.84

¹ Prior to 1910 certain States did not maintain records of accidents. The above rates are based exclusively on tonnage and men employed in States for which accident records are available.

Relation Between Accidents and Cost of Building Construction

AN ESTIMATE that the total cost of industrial accidents in the construction industry amounts to over a quarter of a billion dollars a year was presented at the general meeting of the National Conference on Construction, held in Washington, October 13-14, 1932, in a report of the committee on elimination of waste and undesirable practices.

The direct losses for which employees are compensated were figured by the committee as over \$54,000,000 a year, based on \$7,000,000,000 worth of new construction yearly, allowing 40 per cent as the cost of labor, and applying the average insurance premium rate and the average paid-claim ratio. The additional cost of the indirect losses—loss of employee's time, stoppage of work, shifting of men and foremen, investigating the accidents, loss in morale, repairing property damage, minor noncompensable injuries, etc.—were placed at four times the direct losses, the ratio ordinarily accepted for industry, though it was stated that certain checks on construction accidents indicated it to be even higher.

It was pointed out that the costs of building operations are seriously affected, in addition to the human misery and suffering involved and the burden imposed on society by these accidents, and that the number of both fatalities and less serious injuries is growing. The trouble, according to the committee, is that progress in mechanical methods has not been accompanied by a corresponding development in supervisory methods. The real causes of the accidents are not known, and the industry has no practical plan for accident prevention. While it is now engaged in an excellent educational safety program, it does less actual accident-prevention work than some other branches of industry,

such as the steel, textile, food, clothing, and mining industries, although the hazards are equal, or even greater, than the hazard of such industries.

The committee advised that the remedy consists in the systematic and orderly combination of accident-prevention work with supervisory routine, on a basis of facts recorded in a more intimate, regular, and effective manner. It stated that faulty instruction, lax discipline, unsafe practices, inattention, and physical and mental impairment, or inefficiency are some of the real causes, and produce 88 per cent of all injuries. According to a recent survey, faulty instruction alone (no instruction and instruction not enforced) is responsible for nearly 50 per cent of the injuries. These causes, the committee declared, are the very things which construction executives are able to control, and do control in relation to quality, speed, and volume of the work. It was suggested that safety practices be made a part of the task of foremen and superintendents, not simply in the passive rôle of reporting accidents but in the active rôle of preventing them, and that they should be rated with some reference to their safety records.

The report referred to the efforts of some associations, which have resulted in gratifying reductions of accidents for their members, but stated that, in the last analysis, the problem calls for specific action by the individual employer himself. He must, through cooperation with his insurance carrier, analyze accident-producing conditions, determine the real cause of the predominating injuries, place responsibility upon his executive and supervisory staff for the correction of such causes, make an issue of the matter, and follow through until satisfactory improvement is made.

The suggestions of the committee were approved by the conference, which ordered the executive committee to publish and distribute the report, and to urge all construction groups to cooperate with insurance companies in further reduction of accidents and to assign direct and active responsibilities for safe construction to the superintendent and foremen on the operations.

Industrial Injuries in Maine, 1931

A COMPILATION of industrial injuries reported to the Industrial Accident Commission of Maine for the calendar year 1931 is presented by the department of labor and industry of that State in the April, 1932, issue of its Industrial Safety Bulletin.

It is explained that the figures are not exactly comparable, as some of the industrial establishments include in their reports all cases requiring medical attention, while other establishments report only cases involving a time loss of more than seven days.

Attention is called to the fact that the report indicates that 7.8 per cent of all injuries became infected, which is declared to be a most deplorable condition and indicating a sad lack of appreciation of modern first-aid facilities.

The following table shows a summary of the tabulation:

NUMBER OF INDUSTRIAL INJURIES REPORTED IN MAINE AND NUMBER FOLLOWED BY INFECTION, IN 1931

Industry	Number of injuries		Industry	Number of injuries	
	Total	Fol- lowed by in- fection		Total	Fol- lowed by in- fection
Pulp and paper.....	1,523	76	Lime and cement.....	83	5
Lumber mills.....	261	15	Building construction and repairs.....	1,130	51
Shoes and leather.....	640	115	Bridge building.....	81	2
Cotton.....	496	48	Structural steel.....	71	2
Woolen.....	725	65	Clay products.....	6	0
Woodworking.....	817	66	Foundry and machine shops.....	568	36
Mercantile.....	514	60	Laundries and cleaners.....	85	13
Public utilities.....	355	11	Printers and binders.....	172	7
Canning.....	230	52	Hotels and restaurants.....	408	46
Can manufacturing.....	5	1	Garages.....	606	46
Road work.....	704	23	Public employees.....	490	26
Woods operations.....	63	1	Miscellaneous.....	2,886	257
Shipbuilding.....	623	48			
Boats and canoes.....	72	2			
Quarrying and finishing.....	298	13	Total.....	13,912	1,087

WORKMEN'S COMPENSATION

Executive of Corporation Held Not an "Employee" Within Indiana Compensation Act

IN ORDER to entitle a stockholder, director, or officer of a corporation to compensation under the Indiana workmen's compensation act, "he must be an employee whose remuneration is popularly designated as wages, rather than salary; * * * whose labor is manual or of a like degree of industrial or commercial importance as manual labor when viewed from the standpoint of individual accomplishment."

This decision was handed down by the Appellate Court of Indiana in the case of *Manfield & Firman Co. v. Manfield* (182 N. E. 539). *Manfield & Firman Co.* is a corporation composed of three stockholders, Manfield, Firman, and Schlossberger. The corporation is engaged in the business of selling junk in Terre Haute, Ind., and is managed by Firman and Manfield. These two divide their activities so that Manfield does most of the work on the inside, while Firman handles the outside work. When one is sick the other usually performs the duties of both. Firman received \$6,500 per year and held the title of president; Manfield was designated secretary and treasurer and received \$6,800 per year.

On Saturday, November 10, 1930, it became necessary for one of the members of the company to go to Peoria, Ill., to secure three railroad frogs for use in the business of the corporation. As Firman was sick at the time, Manfield went to Peoria in the company's car. He left Peoria at about 6 o'clock the following Monday morning and while en route to Terre Haute, Ind., an accident occurred resulting in the loss of an eye.

He filed application before the Indiana Industrial Board and by a 5 to 2 decision of that body was awarded compensation at the rate of \$16.50 per week for 150 weeks. The company appealed from the decision of the board to the Appellate Court of Indiana.

In reviewing the testimony the court found that Manfield had testified that—

He was the manager and supervisor and received a salary of \$6,800 per year as secretary and treasurer. He testified further that he had no superior officer; nobody to supervise his work; he reported to no one; that he supervised all the rest, and was his own boss; went wherever he desired and kept no account of his time; took time off when he wanted to, and made no reports of time put in, and did extra work when it was required. "I did not have to punch a clock," he testified.

Two employees testified also that they considered Manfield the man in authority and that they received their instructions from him. Many cases were cited which clearly defined the distinction between employer and employee as considered under the workmen's compensation act. The court quoted from these cases authority

to the effect that while "a person may be a stockholder and even a director or an officer of a corporation and at the same time be an employee and entitled to compensation," such was not the meaning of the term "employee" in its ordinary use. Continuing, the court said:

By the provisions of the workmen's compensation act the award is on the basis of certain percentage of what is designated as average weekly wages rather than the salary of the workman involved, and we are unable to see how in this case, where the appellee received a salary of \$6,800 per year as secretary and treasurer of the corporation, the board was able to arrive at any amount of weekly wage.

In a technical sense, all persons who are officers and directors of a corporation are employees, for the reason that a corporation can only function through agents and employees, but when we consider the workmen's compensation act a substantial distinction is recognized.

Those who own the majority stock, dictate the policy of the corporation, and manage its prudential affairs, are considered in the same category as partners in the management of a business.

Manfield and Firman in real essence owned this business and managed it in form as a corporation but in substance it was their business.

The claimant in this case was not an employee or a workman entitled to compensation under the law.

The award of the industrial board was therefore reversed.

Compensation Denied for Injury Caused by Willful Attempt to Injure Another

ACCORDING to the Court of Appeal of Louisiana, compensation is not recoverable for the death of a night watchman when the evidence shows that he was the aggressor in an affray. (*Toney v. George A. Fuller Co. et al.*, 143 So. 541.)

George Toney was employed as night watchman about the grounds of the new State capitol building which was being constructed by the George A. Fuller Co. Adjoining the capitol grounds are the grounds of the Louisiana State University, where George Sevier was employed as watchman.

On February 4, 1931, Toney was killed by Sevier while he was on the grounds of the capitol building. These two watchmen had previously been on friendly terms and frequently visited each other. On the night before the killing occurred Sevier asked Toney to return a light bulb which he had taken from the premises of the university. An argument occurred when Toney returned the bulb and the following night as Sevier was going across the capitol grounds "to put on the main lights that went to the road" he was accosted by Toney, who ordered him off the premises. The two men began fighting after a brief argument and according to Sevier's testimony Toney struck him across the head with the barrel of his pistol and knocked him down; and that "as he was getting up, seeing Toney was going to hit him again, [he] began to shoot." Toney hit him on the head three times, badly bruising him and Sevier shot again, killing Toney almost instantly.

Mrs. Virginia Toney, the widow, filed suit against the George A. Fuller Co., under the Louisiana employers' liability act to recover compensation for the death of her husband. The district court, parish of East Baton Rouge, denied compensation and the widow

appealed to the Court of Appeal of Louisiana. She contended that "Sevier was a trespasser on the capitol grounds when Toney, acting in the discharge of his duties as watchman and in attempting to eject him therefrom, was killed, and that his dependents are entitled to compensation."

The court, however, reviewed the evidence and reached the same conclusion as the lower court, that Toney was the aggressor and that Sevier acted in self-defense when firing the fatal shot. It was also shown by the evidence that Toney had been instructed not to carry a gun and was specifically prohibited from using force in performing his duties. He had been instructed to call upon the police if anyone resisted his authority. The court concluded that "when a watchman acting under such restrictions uses brutal force, even against a trespasser, he indulges in the commission of an act not only against his instructions but beyond the scope of his employment thus limited by his employer."

The court then quoted section 28 of the compensation statute which provides: "That no compensation shall be allowed for an injury caused (1) by the injured employee's willful intention to injure himself or to injure another * * * or (4) by the employee's deliberate breach of statutory regulations affecting safety of life or limb."

In applying these provisions of the statute to the facts before the court in the case at bar, the court concluded:

We find, as before stated, that Toney was actuated by a feeling of revenge and that his act was therefore deliberate. If we be mistaken in the motive thus ascribed to him, it, however, clearly appears that in beating up Sevier with his pistol, and before Sevier had drawn his pistol or attempted to defend himself, Toney was acting with the "willful intention" of injuring Sevier, which brings the case directly under the provisions of the statute quoted under heading one.

Our statutes, unquestionably, forbid the commission of such offenses as assault and battery and which are enacted for the protection of "safety of life or limb." The breach of those "statutory regulations" is prohibited by our laws. It is therefore obvious that when Toney committed an unprovoked assault on Sevier he was guilty of the "deliberate breach of statutory regulations affecting safety of life or limb," and had debarred himself, if he had lived, from any right to recover under our compensation statute, which precludes his widow and dependents from relief under that law.

Recent Compensation Reports

Kansas

IN THE annual report of the workmen's compensation department of the Commission of Labor and Industry of Kansas for the year ending June 30, 1932, it is pointed out that three large insurance carriers, with a large volume of compensation business in Kansas, are in the hands of receivers, with the resulting lack of compensation payments to injured workers as prescribed by law.

Attention is also called to the condition of mine operators, who are no longer able to obtain compensation insurance coverage, as the last insurance carrier handling coverage for that industry withdrew from the State on August 1, 1932. A number of the mine operators are financially unable to qualify as self-insurers, and consequently the mining industry, one of the most hazardous industries, is left to a considerable extent without security of payment for injuries or means of enforcing collection of compensation.

It is recommended that the present system of State appropriations for the operation of the department be discontinued and that the administrative expense be obtained entirely through the collection of fees, requiring adjustment of the law to provide the additional funds.

The commission states that, although the total injuries reported in 1931-32 were 39.4 per cent less than during the peak year 1929-30, the reported permanent injuries had increased 46.2 per cent and the reported fatalities had decreased only 4.4 per cent. It is also pointed out that the average medical and compensation costs per case have increased decidedly during the past year. The increase in the medical cost, from \$49.26 per case in 1930-31 to \$66.03 in 1931-32, is thought to be due principally to the proportionately larger number of permanent injuries during the latter year and the increase in maximum medical liability under the law, on May 28, 1930, from \$200 to \$500. The average compensation payment in the 3,480 compensation cases closed during the year was \$178.18 per case, as compared with \$135.54 per case in the year 1930-31, an increase of 31.5 per cent.

Table 1 shows the number of injuries causing disability for more than the day of injury, as reported to the commission for the year 1931-32, by industry and extent of disability.¹

TABLE 1.—NUMBER OF INDUSTRIAL INJURIES REPORTED IN KANSAS, 1931-32, BY INDUSTRY

Industry	Number of injuries			
	Deaths	Permanent disabilities	Temporary disabilities	Total
Clerical and professional service.....	1	18	221	240
Construction.....	26	110	1,404	1,540
County and municipal.....	2	5	130	137
Manufacturing:				
Food and kindred products.....	13	126	1,444	1,583
Metal goods, vehicles.....	6	47	762	815
Paper and paper products, printing.....	1	8	87	96
Smelters and oil refineries.....	4	19	133	156
Textiles, leather, laundry.....	0	5	100	105
Wood and other building materials.....	0	15	209	224
Mining, metallurgy and quarry:				
Coal mining.....	10	31	252	293
Metal mining, lead and zinc.....	5	17	122	144
Drilling oil and gas wells.....	10	77	701	788
Quarrying, stone crushing.....	5	11	165	181
Trade.....	8	40	509	557
Transportation and public utilities:				
Steam, interurban and street railways.....	2	12	101	115
Motor transportation.....	1	11	135	147
Light, power, and gas companies.....	15	25	265	305
Express companies.....	0	2	28	30
Total.....	109	579	6,768	7,456

Oregon

THE financial report of the State Industrial Accident Commission of Oregon for the fiscal year ending June 30, 1932, shows an excess of disbursements over receipts for the year of \$121,003. Receipts of premiums by the State accident fund amounted to \$1,864,847.29 from the employers and \$255,740.57 from the workers, a total of \$2,120,587.86. Interest, penalties, and other receipts increased the amount to \$2,473,915.82.

¹ For data covering previous four years, see Monthly Labor Review for January, 1932.

Disbursements, totaling \$2,594,918.82, included payments for time loss, \$817,210.28; medical aid, \$613,422.82; pensions \$723,062.05; burial expenses, \$8,733.25; permanent partial disability less than 24 months, \$158,285.89; physiotherapy and rehabilitation, \$41,594.94; and administrative expense, \$232,659.63.

Philippine Islands

THE report of the Secretary of Commerce and Communications of the Philippine Islands for 1931² shows that a total of 2,591 industrial injuries was reported to the bureau of labor during the year, as against 3,092 injuries reported in 1930, a decrease of 16.2 per cent. These consisted of 173 fatalities, 98 permanent partial disabilities, and 2,320 temporary disabilities.

Compensation amounting to 56,893.10 pesos (\$28,446.55)³ was awarded in 1,477 cases, an average of 38.52 pesos (\$19.26) per case. The additional sum of 37,142.49 pesos (\$18,571.25) was reported as paid by employers for medical, hospital and funeral expenses, but the actual medical and hospital cost was considerably more, as the majority of the large plantations and other industrial establishments maintain individual medical and hospital services and do not report the cost of treatment for minor injuries. In 540 cases the disability did not last beyond the waiting period of seven days and was therefore not compensable, while 35 cases either did not come under the scope of the law or were withdrawn, and 539 cases (including 44 fatalities) were awaiting adjustment at the close of the year.

The nationality of the injured workers is given as follows: Filipinos, 2,544; Chinese, 22; Japanese, 18; and Americans, 7. Nine of them were females and 2,582 males, 1,219 were married and 1,372 single, while 45 per cent of all injured were 20 and under 30 years of age.

The principal causes of the injuries were: Vehicles, 48 fatal and 542 nonfatal; falls of persons, 4 fatal and 445 nonfatal; explosions, electricity, fire, and hot substances, 15 fatal and 349 nonfatal; falling objects, 18 fatal and 330 nonfatal; machinery, 30 fatal and 301 nonfatal; and handling of objects, 16 fatal and 254 nonfatal.

Table 2 shows the number of injuries reported in 1931, by industry.

TABLE 2.—NUMBER OF INDUSTRIAL INJURIES REPORTED IN THE PHILIPPINE ISLANDS IN 1931, BY INDUSTRY

Industry	Number of injuries	Per cent of total
Land and water transportation, wharves, etc.....	881	34.00
Oils, fats, etc.....	46	1.78
Metal works, etc.....	52	2.01
Mining, quarrying, and other stone works.....	459	17.72
Food, drinks, tobacco, etc., manufacturing and distribution.....	542	20.92
Textiles, clothing, hats, shoes, and leather goods.....	2	.08
Building and engineering construction.....	41	1.58
Books, printing, publishing, etc.....	7	.27
Wood, furniture, sawmills, and lumber yards.....	444	17.14
Government activities.....	21	.80
Miscellaneous and general labor.....	96	3.70
Total.....	2,591	100.00

² In annual report of the Governor General, for 1931. (Printed as House Doc. No. 355, 72d U. S. Cong., 1st. sess.)

³ Conversions into United States currency on basis of peso=50 cents.

LABOR LAWS AND COURT DECISIONS

Labor Legislation of 1932

DURING the legislative year of 1932, nine States met in regular session,¹ while special sessions were held in 12 States.² The Territory of Hawaii met in special session, while in Puerto Rico, in addition to the regular session, a special one was called. The regular annual session of the Legislature of the Philippine Islands adjourned on November 10, 1932, but at the time of the publication of this article, no definite information had been received as to whether any labor legislation was enacted.

The Seventy-second Congress of the United States also met during the year, and enacted several important laws of general interest and of importance to labor. Of national interest, the Congress passed the Federal anti-injunction law.³ Agitation for the enactment of this kind of a law has had the attention of the Congress for many years.

The repeal of the national trades-unions act of 1886 was also effected. Several laws of importance to the District of Columbia included a credit union law;⁴ an act regulating the registration of trade-marks of trade-unions;⁵ one providing for the licensing of plumbers; and a law for the protection of the wages of employees of contractors.⁶

The present review does not include workmen's compensation legislation enacted in 1932, a résumé of which subject was published in the November, 1932, issue of the Monthly Labor Review. The present article is merely a topical outline of labor legislation (except that relating to occupational licenses) adopted in 1932, with citation of the laws, however, given in every instance.⁷

Contract of Employment

THE legislature of New Jersey (ch. 244) declared all antiunion contracts void.⁸ Such contracts are those which specify that neither party to a contract may join a labor organization or any organization of employers. A Federal anti-injunction law (47 U. S. Stat. L. 70) was passed by the Seventy-second Congress.

The Sunday labor law was amended in Massachusetts, Mississippi, and Virginia. In Massachusetts (ch. 96) the delivery of kosher meat on Sunday is permitted; in Mississippi municipalities are empowered to regulate Sunday closing hours for garages and gasoline stations

¹ Kentucky, Louisiana, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina, and Virginia.

² Alabama, Arizona, Arkansas, Delaware, Illinois, Indiana, Maine, Michigan, Ohio, Pennsylvania, Texas, and West Virginia.

³ See Monthly Labor Review, July, 1932, p. 66.

⁴ Idem, August, 1932, p. 311.

⁵ Idem, April, 1932, p. 831.

⁶ Idem, September, 1932, p. 545.

⁷ Following the usual procedure a more complete summary of labor laws will be given in a bulletin on labor legislation, 1932, to be published later.

⁸ The text of this law was given in full in the September, 1932, issue of the Monthly Labor Review (pp. 544-545).

(ch. 248); and in Virginia (ch. 328) the sale of gasoline or any other motor oil is allowed.

The matter of preference in the employment of labor was legislated upon in three States. Massachusetts (by ch. 183) extended to May 15, 1933, the preference of persons with dependents in the classified labor service. The preference act in New Jersey was enlarged so as to include subcontractors (ch. 226). In the construction of roads, etc., in Virginia employment must be given to the unemployed surplus citizens (ch. 235). A residence of two years is hereafter required in Mississippi for employment on public works (ch. 317). Preference for Mississippi products, etc., was provided by chapter 330.

Employment Agencies

Public agencies.—In Kentucky a free public employment service was created by chapter 31. Cooperative agreements with other public agencies are provided for and the department of labor is directed to establish employment offices in the State.

Hours of Labor

THE hours of labor on public works received attention in New Jersey. By chapter 176 the scope of the 8-hour day law was enlarged so as to include all laborers, etc., employed by any public agency in the State. This law was later amended by chapter 230, which further broadened the 8-hour day provision and required such provision must be hereafter contained in every contract. The hours of labor of operators of motor buses, etc., were regulated by Arizona (ch. 6, special session), Mississippi (ch. 332), and by New York (ch. 471). Massachusetts, by chapter 110, strengthened the hours of labor law, by requiring that notices be kept posted as prescribed by the commissioner of labor.

Child Labor

LOUISIANA (Act No. 70) strengthened and extended the law establishing part-time schools for employed children. A minimum of 144 hours of instruction per year is required for boys 14 to 16, and girls 14 to 18 residing in incorporated cities. This State also enlarged the act relative to work permits and school certificates (Act No. 167). The Massachusetts law will hereafter permit children to participate in any dancing exhibition conducted by a dancing school at graduation exercises (ch. 27). In New Jersey, children under 18 years of age are forbidden employment in any occupation considered harmful by the commissioner of labor (ch. 55). By chapter 618, a general penalty for all violations of the child labor law is provided in New York, and in the metropolis the children's courts are now given exclusive original jurisdiction in all child-labor proceedings.

Safety and Health

VIRGINIA passed an act providing for the establishment of a safety codes commission (ch. 32). In Kentucky an act (ch. 98) was passed insuring the safe development and operation of oil and gas wells, mines, etc. The use of approved electric contacts or interlocks on fire doors of hoistways was provided by chapter 194 in New York;

while chapter 470 enlarged the act for the protection of employees of contractors engaged in excavation work.

In Rhode Island local inspectors may now issue permits for the erection, etc., of any building (ch. 1929), and health certificates of bakery employees must be filed and annually renewed showing that employees are free from contagious diseases (ch. 1903).

Wages

LAWs for the protection of the wages of employees, etc., of contractors were passed by the Congress of the United States, applicable to the District of Columbia (47 U. S. Stat. L. 608), and also by New Jersey (ch. 142) and Virginia (ch. 275). The Legislatures of Hawaii, Indiana, and New York acted upon the subject of wages of laborers on public works. The minimum daily rate was reduced in Hawaii from \$3 to \$2.50 (Act No. 36). In Indiana (ch. 60, special session) a bidder hereafter must submit the hourly rates to be paid laborers on State highway work, and such rates become a part of the contract. In West Virginia (H. J. Res. No. 4, p. 74, special session) contractors on road construction must specify in all bids the minimum wage scales to be paid, and the percentage of skilled and unskilled local labor they propose to employ; the state road commission must consider these subjects in awarding contracts. Laborers on public works are further protected in their wage claims in New York by an amendment (ch. 472), which requires all contractors to file the wage claims of laborers with a disbursing officer who may withhold the amount owed and pay it directly to the laborer. The wage payment law was enlarged and changed in Kentucky (ch. 44), Massachusetts (ch. 101), New Jersey (ch. 249), Puerto Rico (Act No. 13), and South Carolina (Act No. 735). The subject of the assignment, garnishment, etc., of wages was treated in Kentucky (ch. 46), Mississippi (ch. 138), New Jersey (ch. 62), Louisiana (chs. 181 and 183), and Rhode Island (chs. 1887 and 1898).

Cooperative Organizations

Credit unions.—A new act providing for the incorporation of credit unions in the District of Columbia was passed by the Congress of the United States (47 U. S. Stat. L. 326). New York (ch. 421) amended its credit union law relative to the maximum liability of a person to such corporation. The powers of the executive officers of a credit union were enlarged in Rhode Island (ch. 1913).

Cooperative associations.—By chapter 383, New York amended articles 1-4 and 6-8, of chapter 231, Acts of 1926, providing for the creation of cooperative associations.

Labor Unions and Disputes

THE national trades-unions act of 1886 (24 U. S. Stat. L. 86) was repealed by an act of the Seventy-second Congress (47 U. S. Stat. L. 741). Associations of employees in the District of Columbia were authorized by the Congress (47 U. S. Stat. L. 50) to adopt a device to designate the products of their labor by means of trade-marks.

Retirement and Pensions

Old-age pensions.—The Massachusetts provision for financing the old-age pensions, by levying a tax of \$1 on all male citizens, was extended through 1933, by the provisions of chapter 259. New Jersey (ch. 262) prescribed the nature and limitation of the investment of surplus old-age pension funds.

Mothers' pensions.—An enlarged State mothers' pension law was enacted in New Jersey (ch. 263).

Public employees.—The Legislature of Hawaii passed a law (Act No. 50) providing for the maintenance of the pension fund. In Massachusetts an act was passed which increased the cash value of full maintenance from \$5 to \$7 a week, and extended the maintenance provisions to cover a position in any division of the State service (ch. 268). In New Jersey a person is prohibited from receiving a pension while holding public office (ch. 259). The New York State employees' retirement law was amended in various respects by chapters 6-11, 20, 45, 66, 94, 98, 256, 283, and 454, while the New York City employees' retirement system was amended by chapters 389, 437, and 438.

Vocational Education and Rehabilitation

Vocational education.—In New York, by the provisions of chapter 384, the acceptance of Federal aid was incorporated into the education law. Provisions were also added relative to the management, etc., of the various provisions of the act. In order to carry out the purposes of the vocational education act, provision was made in Puerto Rico (Act No. 29) to defray expenses of equipment, buildings, etc., from the appropriation.

Vocational rehabilitation.—Congress authorized (47 U. S. Stat. L. 448) the appropriation of \$1,000,000 for each of the fiscal years 1934, 1935, 1936, and 1937 for cooperation with the States in the promotion of vocational rehabilitation.

Labor Departments, etc.

IN Puerto Rico a division of economic and social research and investigation in the department of labor was created by a joint resolution, No. 45 (p. 656). The establishment of this division resulted from a survey conducted in pursuance of a resolution (No. 16), July 19, 1929, to determine the causes which produced industrial, etc., disturbances in the Island.

The purpose of Act No. 16, enacted by the Legislature of Puerto Rico, was merely to make the mediation and conciliation law conform to the department of labor act of 1931, which segregated the departments of agriculture and labor. The chairman of the Puerto Rican Mediation and Conciliation Commission must hereafter devote his entire time to the office, at a fixed salary of \$3,000 per annum (Act No. 37).

Investigative Commissions

THE legislatures of two States (Massachusetts and South Carolina) provided for the investigation of several subjects directly or indirectly affecting labor. In Massachusetts three resolutions were

adopted, one (Resolves, ch. 30, p. —) authorizing the department of labor to consider the extension of the one day's rest in seven law to cover certain employees now exempt by law, the second (Resolves, ch. 31, p. —) authorizing the commissioner of public welfare to investigate the advisability of reducing the minimum age of persons entitled to old-age assistance, and the third (Resolves, ch. 34, p. —) authorizing the department of labor to investigate the advisability of establishing a standard of wages to be paid by contractors on public works, and the inclusion of such rates in specifications for bids and in the contracts of award. In South Carolina by a joint resolution (Act No. 1076) the State board of health was authorized to investigate the effects of the use of the "stretch-out system" in textile mills.

By a joint resolution (47 U. S. Stat. L. 65) Congress authorized the Interstate Commerce Commission to investigate the possibility of establishing a 6-hour day for railroad employees.

Miscellaneous

Convict labor.—Convict labor was the subject of legislation in two States. Massachusetts (ch. 252) has taken advantage of the Federal law divesting convict-made goods of their interstate character, by enacting a State law regulating the sale of prison-made goods after January 19, 1934. Virginia, by the provisions of chapter 133, repealed an act of 1928 (ch. 511) relative to the manufacture of motor-vehicle license plates, etc., by prison labor.

Absent voting.—In Rhode Island an absent voting law (ch. 1863) was enacted, while New York by chapter 569 legislated upon the qualifications of a voter for an absentee ballot. The absent voting law in Mississippi was repealed by chapter 292.

Legal holidays.—In Kentucky, June 3 (Confederate Memorial Day) was made a legal holiday (ch. 123). Louisiana (Act No. 165) designated certain holidays to be observed, apparently omitting general election day from the former list of holidays.

Employees' stock ownership.—The New Jersey act providing for employees' stock ownership was enlarged as to the sharing of profits (ch. 192).

Industrial home work.—New York and Massachusetts legislated on industrial home work. By chapter 234, Massachusetts hereafter requires the furnishing of information to the department of labor with respect to the performance of certain industrial work in tenements. New York (ch. 240) merely modified an exception in the tenement manufacture law to permit openings from shops on the ground floor to other parts of the building.

Industrial police.—The appointment of special or industrial police officers on toll-bridge properties was authorized, by chapter 4, in Virginia.

Legal liability.—In Rhode Island (ch. 1912) a cause of action survives the death of a person liable for damages, while in Virginia the law of liability of railroad companies for injuries to their employees exempts employees in interstate commerce and those not exposed to the hazards incident to the maintenance and operation of the railroads (ch. 46).

Mechanics' liens.—Mechanics' liens were the subject of legislation in three States. A mechanic's lien was extended to oil and gas, etc.,

wells in Louisiana (Act No. 161). A priority of liens was extended to cover foremen and superintendents in mining and manufacturing establishments in Virginia by the provisions of chapter 329. The Legislature of Virginia also passed an act (ch. 161) which considered certain additions about the grounds of a building as materials furnished and subject to a mechanic's lien. In addition to the extension of the mechanic's lien law, New York also amended the procedural features, etc., of the law by the enactment of chapters 531, 532, 533, and 627.

Traveling Salesmen Required to Secure Peddler's License under Arkansas City Ordinance

THE city of Pine Bluff, Ark., adopted an ordinance requiring all persons engaged in certain occupations to secure a license. Part of the ordinance (sec. 1300 of Lyle's Digest of the Ordinances of the City of Pine Bluff) reads as follows:

It shall be unlawful for any person to engage in, exercise, or pursue any of the following vocations without having first obtained and paid for a license therefor from the proper city authorities, the amounts of which license are fixed as follows, to wit:

No. 30. For peddling any other article not otherwise provided for, \$3 per month.

No. 32. For peddling apparel, dry goods, notions, household goods, and any other article not otherwise specifically provided for, \$5 per month, or \$50 per annum.

D. J. Rose was the representative of a wholesale cigar house in Little Rock and solicited business from firms located in Pine Bluff. It was his practice to forward the orders received to his firm in Little Rock, whence the goods were shipped to the customer. However, he carried a limited supply of cigars with him in his car and when the customer was out of a particular brand Rose would leave him a box of these cigars for making sales until the goods ordered arrived from Little Rock. He followed the same practice with new customers. In such cases the cost of the cigars left with the customer was included in the bill for the merchandise ordered and was paid in the regular course of business, no money being paid to the salesman.

Having failed to secure a peddler's license as cited above, Rose was convicted in the Circuit Court of Jefferson County, Ark. He appealed to the Supreme Court of Arkansas, insisting that "he was only a traveling salesman or drummer and not a peddler within the terms of the ordinance." He also challenged the validity of the ordinance as being "an attempt to levy an occupational tax" upon the business of the wholesale house.

In discussing the questions involved in the case, the court reviewed the powers granted by the constitution to the general assembly, among which was "the power to tax hawkers and peddlers." The legislature defined the term as follows:

Whoever shall engage in the business of selling goods, wares, or merchandise of any description, other than articles grown, produced, or manufactured by the seller himself, or by those in his employ, by going from house to house, or place to place, either by land or water, to sell, the same is declared to be a peddler or hawker. (Sec. 9793, Crawford & Moses' Digest.)

As this definition made no exception of drummers or traveling salesmen, the majority of the court was of the opinion that "the method employed by the salesman in disposing of the cigars, delivering part of the merchandise sold at the time of the sale from stock carried with him for immediate use by the purchaser * * * is such an engaging in the business of selling goods, wares, and merchandise within the meaning of the statute as comes within its prohibition." The court was also of the opinion that the license fee was neither an occupational tax within the meaning of the law nor a violation of the statute providing that no firm shall pay a license tax in more than one city of the State unless it maintains a place of business in more than one city.

The judgment of the lower court was therefore affirmed. (*Rose v. City of Pine Bluff*, 52 S. W. (2d) 979.)

Amendments to Chinese Labor Legislation

ON SEPTEMBER 10, 1932, the Legislative Yuan of China amended both the act for the arbitration of labor disputes¹ and the labor union law.²

Mediation and Arbitration Act

SOME of the principal features of the amended arbitration act, given in the Chinese Economic Bulletin of September 17, 1932, are as follows:

In the event of any dispute arising between capital and labor, the local administrative organ (i. e., the municipal or the district government concerned) shall—either at the request of one of the disputants or, whenever it should deem necessary, on its own authority—refer such dispute to a board of mediation, which shall attempt to bring about a compromise between the two parties. A compromise so effected will be deemed to have the same binding effect as a contract signed between the two parties.

Where the board of mediation fails to effect a compromise, the dispute shall, upon request by both of the disputants, be referred to a board of arbitration for settlement. The local administrative organ may, however, refer such dispute for arbitration on its own authority, if the said dispute shall have extended over one month or where it affects any of the following enterprises:

1. Manufactories of military supplies directly operated by Government.
2. Waterworks, electric-power plants, or gas companies.
3. Postal, telegraph, telephone, railway, tramway, navigation, or public omnibus services.

The award of the board of arbitration shall be binding upon the two parties, and there shall be no appeal against such award.

(In this connection, it may be noted that as the circumstances under which the local administrative organ may refer disputes for mediation or subsequently for arbitration are not clearly defined in the law, the said organ is invested with practically unrestricted discretion to invoke mediation and/or arbitration for the settlement of such disputes.)

The board of mediation shall be composed of from 5 to 7 members, 2 to be nominated by each of the disputants, and from 1 to 3 to be nominated by the local administrative organ. A nominee of the latter shall preside at meetings of the board.

¹ Translation of original act appeared in Monthly Labor Review of September, 1929 (pp. 98-102), in which issue, however, the date of the promulgation of this law was erroneously given as June 9, 1929, the correct date being June 9, 1928. The act was amended March 17, 1930. See publication by Chinese Ministry of Industry, Commerce, and Labor entitled, "Three of the recent labor laws promulgated by the National Government of the Republic of China, Nanking (pp. 19-24).

² Translation in Monthly Labor Review of February, 1930 (pp. 106-113).

The board of arbitration shall be composed of 5 members, namely, 1 representative each from the local municipal or district government, the local party headquarters, the local district court, and 1 each from employers and employees not directly involved in the dispute.

Employers' and workers' organizations will each be required to submit annually to the competent authorities a panel of from 15 to 30 persons, from whom the two members (representing employers and employees not directly interested in the dispute) for the board of arbitration are to be designated by the local administrative organ.

It will be seen that while the board of mediation can only use its good offices to bring about a compromise acceptable to both parties, the board of arbitration has the right of passing judgment upon the merits of a dispute, and rendering an award which shall be binding upon both parties.

Neither employers nor workers in any of the public-utility enterprises mentioned above may resort to a lockout or strike as the result of any dispute. In all other cases no lockout or strike may be declared while a dispute is pending either before the board of mediation or the board of arbitration. It is further stipulated that during the pendency of such disputes employers may not discharge their workers.

Workers or labor unions shall be strictly prohibited from any of the following acts:

1. Forceful closure of firms or factories.
2. Seizure or sabotage of goods or machinery of firms or factories.
3. Coercion of other workers to join the strike.

Aside from the above stipulations, various penalties in the form of fines are provided for infractions of the law.

Labor Union Law

THE right of labor unions to declare strikes is greatly restricted by the amendment of article 23 of the labor union law, adopted September 10, 1932.

According to this revision, noted in the above-mentioned issue of the Chinese Economic Bulletin, "no strike may be declared by any labor union unless and until the dispute giving rise thereto shall have come up for mediation and failed of settlement and unless two-thirds of the entire membership of the union shall have signified their assent thereto by voting in secret ballot, at a plenary meeting of the union."

No strike may be declared, despite compliance with these conditions, if the dispute has been, or, according to law, ought to be referred for arbitration.

Labor unions of workers in the enterprises mentioned in article 3 of the labor union law (i. e., public utilities and State enterprises) may not go on strike in any circumstances.

The revised provision also stipulates that when a strike has been called, members of the union shall be strictly prohibited from disturbing public peace and order, from endangering the life and property of employers or other persons, and from demanding an increase in wages in excess of the standard fixed by the Government.

FAMILY ALLOWANCES

Family Allowances for Teachers in Certain Foreign Countries

IN THE majority of the countries of Europe, teachers, in common with other municipal and state employees, receive grants supplementary to their salaries to meet their family responsibilities. At the beginning of 1932 a questionnaire was sent to teachers' associations in Austria, France, Germany, and Holland, requesting data on the existing systems of family allowances in the profession and on the attitude of the organizations toward such grants. The results of this survey are given in the Family Endowment Chronicle (London) of August, 1932.

The monthly scales of allowances for teachers as reported in this study are as follows:

AMOUNTS OF CHILDREN'S ALLOWANCES GRANTED TO TEACHERS IN AUSTRIA; FRANCE, AND GERMANY

[Conversions into United States currency on basis of schilling at par=14.07 cents; franc=3.92 cents, and mark=23.8 cents]

Rank of child in family	Austria		France		Germany ¹	
	Austrian currency	United States currency	French currency	United States currency	German currency	United States currency
	<i>Schillings</i>		<i>Francs</i>		<i>Marks</i>	
First.....	5	\$0.70	55	\$2.16	10	\$2.38
Second.....	10	1.41	80	3.14	20	4.76
Third.....	20	2.81	130	5.10	25	5.95
Fourth.....	25	3.52	160	6.27	25	5.95
Fifth.....	15	2.11	160	6.27	30	7.14
Sixth and subsequent.....	10	1.41	160	6.27	30	7.14

¹ The scale of allowances and regulations vary slightly from one German State to another; the above is the most common scale.

In Holland the allowance for each child up to 18 years of age is 3 per cent of the teacher's salary. Also, the increases in salary according to length of service are larger for married than for single men.

In most instances children's allowances are granted up to 21 years of age if the child is being educated or vocationally trained. Such allowances are frequently paid indefinitely for children not physically able to earn their own living. In Germany a supplemental educational grant is made in special cases.

In addition to allowances for their children, married teachers in Germany are granted a higher rent allowance than the unmarried, and as citizens are given certain valuable concessions in tax payments. The single man pays a 10 per cent income tax, while the married man pays 9 per cent if he has no children and 1 per cent less for each of his

dependent children. Thus, a married man with 3 children pays a 6 per cent tax.

In all these countries there is, in principle, equal pay for men and women. However, in various German States the number of lessons per week given by woman teachers is only 90 per cent of the number given by men and they receive, therefore, 10 per cent less pay.

The opinions of the teachers' organizations replying to the questionnaire, all of which have had considerable experience with family allowances, are almost wholly favorable to these grants. The Dutch Bond van Onderwijzens is the only union that is actually opposed to these benefits. In the replies to a similar questionnaire sent out two years ago to civil-service unions, the only unfavorable response received was also from Holland where it is strongly felt that family allowances are "a contravention of the principle of equal pay for equal work."

The Deutscher Lehrerverein, the largest German union of teachers, referred in its reply to its "Guiding principles" set forth as follows in the Dusseldorf resolution of 1927:

The civil servant's pay is the compensation for his work, and the foundation for his and his family's living. It must, therefore, conform to economic and cultural conditions in general, and to the standard of living of people in similar social positions.

Allowances for household and children are to be provided to insure that the standard of living of the civil servant with a family shall not be substantially lower than that of the unmarried one in a similar position.

The Akademischer Assistentenverband and the German Civil Service Federation cooperate on all pay matters. The federation reports that it does "not consider that there are any disadvantages attached to the family-allowance system. It provides for the education of the children, and is the foundation of 'a good, orderly family life.' It has not adversely affected the basic rate nor prejudiced claims for an increase in salary."

Approval of family allowances as just compensation for married teachers is given by the Verband Evangelischer Lehrer-und Lehrerinnen Vereine, and the Verein für das mittlere Schulwesen declares that such grants are justified by the family's economic position. The Allgemeiner Lehrerinnen Verein (German Association of Woman Teachers) states that the other classes, especially the professional classes, are envious in regard to these allowances. That association recognizes the professional and social benefits of such grants, emphasizing their special value to the younger and low-salaried teachers. The association would prefer, however, to have family responsibilities met through a greater differentiation in the income tax, which would be applicable to all taxpayers.

Favorable attitudes toward family allowances were reported by the three French organizations of teachers. An advantage cited by one French organization is the influence of these grants on the size of families. The Association of Teachers in Secondary Schools, however, is of the opinion that while apparently there is a slow increase in the number of children it is impossible to say that such increase is the result of the allowances. "The general view of all but the Dutch union appears to be that the allowances have been successful in raising the standard of living, and are especially necessary in a time of economic distress such as the present."

It is also reported that the French Association of Secondary School Teachers has been agitating with other associations for a higher scale of allowances to be based on the amount of salary received.

Experiments with Family Allowances in the Church of England

FAMILY allowances are paid to ministers in certain dioceses of the Church of England,¹ a writer reports in the *Family Endowment Chronicle* (London) of August, 1932. In the diocese of Southwark each assistant curate receives a stipend of at least £200² per annum, while he is a deacon, which is afterwards increased by yearly supplements of £10 to £240. Married ministers who have been in holy orders for three years receive a further supplement of £30 for a wife and £15 for each child under 16 years of age.

In the diocese of Lichfield a minister is granted no family allowances "unless he is in receipt of a stipend equivalent to and not less than £250, the net rateable value of his house, where a house is provided, being taken into account." The maximum amount any minister may receive in children's allowances is £50. Grants are made on the following scale: From birth to 9 years of age, £10 for each child. Over 9 to 14 years of age, £15 for each child. Over 14 to 18 years of age, £25 for each child, provided the child is receiving whole-time education at school.

In the St. Edmundsburg and Ipswich Diocese the incomes of the beneficed clergy are made up from all sources by the Diocesan Financial Board to at least £300 a year, together with a grant of £36 for the first child and £27 for each of the remaining children under 16 years of age, and also for each beyond that age being instructed full time at a university, school, or other educational institution.

In the diocese of York the practice of making supplemental grants is resorted to only when the annual income of the benefice is under £300. In such cases the income is raised to £300 and supplemented by an allowance of £20 for a wife and £10 for each child during the period of his education.

Belgian Family-Allowance Funds, December, 1931

THERE were, in December, 1931, 86 primary family-allowance funds operating in Belgium under the family-allowance act of August 4, 1930.^a These funds grouped 28,620 enterprises, employing 1,232,687 workers, of whom 244,145 were females. The total assessments paid by employers into these compensation funds during 1931 amounted to 213,351,463 francs (\$5,931,171).^b Up to December 31, 1931, the primary funds had disbursed in family allowances, in accordance with the scale fixed by law, 168,241,920 francs (\$4,677,125). For the primary compensation funds showing a surplus, the receipts exceeded disbursements by 58,708,107 francs (\$1,632,085); while for the funds in arrears the deficit totaled 13,598,564 francs (\$378,040).

¹ For data on family allowances among the English Methodists, English Presbyterians, the Salvation Army, and home and foreign mission societies, see *Monthly Labor Review*, June, 1931, p. 116.

² Pound at par = \$4.87; exchange rate July, 1932 = \$3.55.

^a Belgium. Ministère de l'Industrie du Travail et de la Prévoyance Sociale. *Revue du Travail*, August 1932, pp. 849, 850. For digest of law, see *Monthly Labor Review*, December, 1930, p. 83.

^b Conversions into United States currency on basis of franc = 2.78 cents.

There remained at the disposal of the national fund the sum of 15,755,490 francs (\$438,003).

Table 1 shows the number and per cent of families in receipt of family allowances, classified by number of children per family, and the total number of children covered.

TABLE 1.—NUMBER AND PER CENT OF FAMILIES IN RECEIPT OF FAMILY ALLOWANCES IN BELGIUM, BY SPECIFIED NUMBER OF CHILDREN PER FAMILY, DECEMBER 31, 1931

Families having—	Families		Number of children	Families having—	Families		Number of children
	Number	Per cent			Number	Per cent	
1 child.....	256,983	55.9	256,983	8 children.....	522	0.1	4,176
2 children.....	121,308	26.4	242,616	9 children.....	194	(1)	1,746
3 children.....	46,487	10.1	139,461	10 children.....	46	(1)	460
4 children.....	19,592	4.3	78,368	11 children.....	18	(1)	198
5 children.....	8,882	1.9	44,410	12 children.....	6	(1)	72
6 children.....	3,869	.8	23,214	13 children.....	1	(1)	13
7 children.....	1,550	.3	10,850	Total.....	459,458	100.0	802,567

¹ Less than one-tenth of 1 per cent.

The number of children receiving allowances is given in Table 2 according to the rank in their respective families.

TABLE 2.—NUMBER OF CHILD BENEFICIARIES IN BELGIUM, CLASSIFIED BY RANK IN FAMILY AND BY AMOUNT OF ALLOWANCE, DECEMBER 31, 1931

[Conversions into United States currency on basis of franc=2.78 cents]

Rank in family	Number of child beneficiaries	Monthly allowance		Rank in family	Number of child beneficiaries	Monthly allowance	
		Belgian currency	United States currency			Belgian currency	United States currency
First.....	459,458	Francs	\$0.42	Ninth.....	265	Francs	\$2.78
Second.....	202,475	15	.56	Tenth.....	71	100	2.78
Third.....	81,167	20	1.11	Eleventh.....	25	100	2.78
Fourth.....	34,680	40	1.95	Twelfth.....	7	100	2.78
Fifth.....	15,088	70	2.78	Thirteenth.....	1	100	2.78
Sixth.....	6,206	100	2.78	Total.....	802,567		
Seventh.....	2,337	100	2.78				
Eighth.....	787	100	2.78				

The Belgian act of August 4, 1930, was not in full effect December 31, 1931. At that date there were still numerous classes of enterprises beyond the application of the law, including all undertakings having less than six workers. The above statistics, therefore, do not cover such enterprises.

A royal decree of November 18, 1931, reduced by 0.05 franc from the fourth quarter of 1931 the tax employers were obliged to pay per worker per day. Furthermore, another royal decree of May 14, 1932, authorized the National Compensation Fund for Family Allowances to agree that the primary funds, by means of their excess of receipts in 1931, take steps to reduce the assessments of employers affiliated in these particular budgets.

Family Allowances in New South Wales, 1931

FAMILY allowances were introduced in New South Wales under the family endowment act of 1927. Endowment is payable, with some exceptions, to all families with more than one dependent child when the income is under a specified amount. A brief account of the operation of this law is given in the 1930-31 New South Wales Official Year Book, from which the following is taken.

The maximum endowment rate is 5 shillings (\$1.22)¹ per week for each child entitled to an allowance. The age limit is 14 years, but the endowment may be paid up to 16 years if the child is incapacitated. Children in charitable institutions also come under the system. Illegitimate children are in general not covered by the law, but the commission of family endowment has discretionary power to pay allowances for such children under special conditions. Other exceptions are the children of alien fathers, Asiatics or aboriginal natives of Africa, the Pacific Islands, or New Zealand, unless born in Australia; native children for whom a pension is received under the widows' pension act or any other Federal or State act except the war pensions act, and children for whom endowment is paid in the public service of the Commonwealth.

Wherever practicable the family allowances are paid to the mothers, who are required to have two years' residence in New South Wales immediately previous to the date of claim. A similar qualification is required for children, with the exception of those under 2 years of age born in New South Wales.

The maximum endowment rate (5 shillings) is decreased in cases where the full allowance would raise the family income above the prescribed limit. Prior to December, 1929, the amount fixed was that of the basic wage prescribed by law and based on the requirements of a man and wife plus £13 (\$63.26) per annum for each dependent child. The endowment was paid for a period of 12 months on the basis of the family income for the year preceding the application for allowances. Beginning with December, 1929, however, the living wage was based upon the needs of a man, wife, and one child, and the family endowment act was therefore amended to exclude from the allowance payable to each family one of the children who would have otherwise been eligible for endowment. Children in charitable institutions, however, are excepted from the provisions of this amendment.

Furthermore, it is provided in the amending act that, except for those having seasonal occupations, allowances may be granted for a period of one, two, three, or four quarters based on the family's average income for a like period of time previous to the date of the claim. Frequent reviews of endowment, however, proved to be very expensive, and in October, 1930, a decision was reached that in general the allowances would be granted for a year.

The family income is defined as the combined income of the claimant, his spouse, and children under 14 years, including weekly payments as workers' compensation, and 5 per cent per annum of real or personal property (except their residence, and the furniture and personal effects therein) which produces less than 5 per cent per annum. In assessing the income the following amounts are excluded, viz, sick pay and funeral benefits from any society; money received under fire-insurance policy; lump-sum payments as workers' compensation or superannuation or gratuity; earnings of children under 14 years; earnings of

¹ Conversions into United States currency on basis of pound = \$4.8665, and shilling = 24.33 cents.

mother from casual employment; war pension for a member of the forces or his wife or widow or his children; earnings from overtime up to £26 [\$126.53]; and where income is derived otherwise than from wages, the amount expended in the production of that income.

The allowances for children are payable from the family endowment fund, to which employers must contribute on the bases of pay roll, including salaries, bonuses, and remuneration for piecework. For each employee provided with board and lodging, £1 (\$4.87) a week is added to the pay roll in order to make the assessment. There is no contribution on the wages of domestic servants engaged otherwise than in the employer's business or trade, nor on the wages of members of a family employed by a parent, nor when the employer's wage bill is not over £150 (\$730) per annum, nor in cases where the employer is a public or benevolent institution or a public hospital.

The contribution for wages paid to employees working under Federal agreements or awards was reduced 10 per cent until January 1, 1930, when such wages became exempt from the tax for family endowment. On the same date exemption was made of wages paid under awards, etc., which provided for children's allowances and of the wages of Crown employees with the exception of those whose employment was in connection with statutory bodies and industrial undertakings. In 1931, however, these exempted wages were again brought into the sphere of taxation, and the full tax was required on wages under Federal agreements and awards.

The family endowment act came into effect on July 23, 1927, and the wages paid between that date and the 31st of the following October were taxed at the rate of 3 per cent. The tax was then suspended because the amount collected exceeded that required to meet the endowment claims and the administration costs. On April 1, 1929, the tax was again imposed, the rate being 2 per cent. A year later it was cut to 1 per cent and on July 1, 1931, raised to 2 per cent.

Statistics on expenditures and tax collections in connection with family endowment for the four fiscal years ending June 30, 1931, are given in the accompanying table:

EXPENDITURES AND TAXES UNDER FAMILY ENDOWMENT ACT AND AMENDMENTS, 1928 TO 1931

[Pound at par = \$4.8665 in United States currency]

Year ending June 30	Number of families receiving endowment at end of year	Expenditure			Tax collected
		Endowment payments	Expenses, including interest on advances	Total	
1928.....	39,132	£814,518	£63,047	£877,565	£1,012,758
1929.....	¹ 42,000	1,553,986	99,353	1,653,339	52,598
1930.....	¹ 37,000	1,261,202	175,632	1,436,834	1,886,715
1931.....	38,948	1,196,484	139,475	1,335,959	1,018,429

¹ Approximate.

In December, 1929, about 8,000 families which were being paid endowment for one child were excluded as the result of the change in the basis of the living wage.

Among the expenses charged to the family endowment fund in 1929-30 are the Treasury advances of £65,013 (\$316,386) in a period of two years, a large deficiency having resulted during the suspension of the tax on wages paid between October 31, 1927, and April 1, 1929. In 1930-31 the interest on advances totaled £23,429 (\$114,017).

Under an award of the New South Wales Industrial Commission, made in June, 1927, the bank officers covered are paid by their employing banks an allowance of £35 (\$170) a year for each child under 14 years of age or under 16 years of age if the child is at school, provided the endowment and the salary combined, apart from other allowances, is not more than £750 (\$3,650) per annum.

COOPERATION

Labor Banks in Germany ¹

ONE of the most important business activities of German labor unions is banking. Labor has organized three banks, the most important of which is the Bank of Wage Earners, Salaried Employees, and Officials of Berlin, popularly referred to as the Labor Bank. It is the financial institution of the leading national association of labor unions, known as the German Federation of Labor Unions. The second bank is the German (People's Bank) Stock Co., of Essen, popularly called the Volksbank, which belongs to the Christian Association of Labor Unions. The German Economy Bank of Berlin, called the Wirtschaftsbank, is the third of these labor banks. It is closely affiliated with the Hirsch-Duncker Labor Unions.

According to the statements of responsible officials of these three banks, the business policy of labor banks must be conservative and solid. The responsible leaders state that funds intrusted to them by organized labor need to be handled with greater care than the ordinary deposits of the regular commercial banks. The maintenance of a high degree of liquidity is the rule, since the banks desire that the labor unions represented by them should be as fully prepared financially as possible in the event of strikes and other contingencies. In line with this policy, the Labor Bank claims that the sharp decline in the net profits and the passing of the dividend in 1931 were not so much the result of the shrinkage in business as the wise writing off of depreciations and the building up of hidden reserves.

The main purpose of a bank is, of course, to make money, be it in a conservative or in a speculative way. The labor unions claim, however, that they have made it a guiding principle of their banks not to take part in any transaction whatsoever involving considerable risks of a speculative nature.

The national labor organizations which are, so to speak, the fathers of the three labor banks, are represented in the smallest German towns and villages; and the labor banks are in a favorable position to utilize the entire set-up of the labor unions, including buildings and personnel, free of charge. This and the good will of the members of the unions represent advantages the value of which it is difficult to estimate in hard cash. Not the least of these advantages is the saving in personnel occasioned by the fact that the labor banks use the employees of the unions with little or no pay. A comparative study of the relationship between total turnover and overhead cost for the typical German branch banks and the three labor banks has revealed the interesting fact that the labor banks have by far the lowest relative cost for management and personnel. According to a high official of the Labor Bank, its success has been to no small

¹ Data are from report of C. W. Gray, American vice consul at Berlin, July 18, 1932.

degree due to savings in overhead expenses brought about by having the branches and agencies of the bank housed in the administrative offices of the local labor unions.

Table 1 shows the operations of the three banks in recent years:

TABLE 1.—OPERATIONS OF LABOR BANKS IN GERMANY IN SPECIFIED YEARS

[Conversions into United States currency on basis of mark = 23.8 cents]

Item	1929		1930		1931	
	German currency	United States currency	German currency	United States currency	German currency	United States currency
Labor Bank:	Marks		Marks		Marks	
Capital.....	12, 000, 000	\$2, 856, 000	12, 000, 000	\$2, 856, 000	12, 000, 000	\$2, 856, 000
Reserves.....	1, 700, 000	404, 600	2, 500, 000	595, 000	3, 300, 000	785, 400
Deposits.....	163, 100, 000	38, 817, 800	167, 900, 000	39, 960, 200	135, 100, 000	32, 153, 800
Current ac- counts re- ceivable.....	95, 400, 000	22, 705, 200	99, 500, 000	23, 681, 000	86, 000, 000	20, 468, 000
Total turnover.....	2, 787, 000, 000	663, 306, 000	3, 363, 000, 000	800, 394, 000	3, 068, 000, 000	730, 184, 000
Volksbank:						
Capital.....	(1)	(1)	2, 000, 000	476, 000	2, 000, 000	476, 000
Reserves.....	(1)	(1)	325, 000	77, 350	325, 000	77, 350
Deposits.....	(1)	(1)	21, 500, 000	5, 117, 000	17, 200, 000	4, 093, 600
Current ac- counts re- ceivable.....	(1)	(1)	18, 800, 000	4, 474, 400	19, 400, 000	4, 617, 200
Total turnover.....	(1)	(1)	481, 000, 000	114, 478, 000	367, 200, 000	87, 393, 600
Wirtschaftsbank:						
Capital.....	(1)	(1)	(1)	(1)	250, 000	59, 500
Reserves.....	(1)	(1)	(1)	(1)	550, 000	130, 900
Deposits.....	(1)	(1)	(1)	(1)	16, 190, 000	3, 853, 220
Current ac- counts re- ceivable.....	(1)	(1)	(1)	(1)	8, 900, 000	2, 118, 200
Total turnover.....	(1)	(1)	(1)	(1)	81, 000, 000	19, 278, 000

¹ Not reported.

Labor Bank.—The Labor Bank, with its 20 branches and 145 agents in other towns, is the leading labor bank. It owes its leadership to the greater numerical strength and stronger feeling of solidarity of the federated labor unions as compared with the more conservative labor unions. Its business administrative council is made up of the representatives of 21 different trade-unions.

The customers of the bank are the federated labor unions and their members, the consumers' cooperatives, a great number of business concerns controlled by the labor unions, and various public institutions.

There has been a decided shift in the debtors of the Labor Bank since 1929. For instance, in that year labor organizations and establishments accounted for 39 per cent of the debtors. This percentage increased to 56 in 1930. On the other hand, public institutions, which represented 57 per cent of the debtors in 1929, dropped to 39 per cent in 1930. Since the relative standing at the end of 1931 was just about the same as at the end of 1930, it is apparent that labor has replaced public institutions as the principal debtor of the Labor Bank.

Net profits and dividends paid by the Labor Bank have been as follows:

TABLE 2.—PROFITS AND DIVIDENDS OF GERMAN LABOR BANK, 1924 TO 1931

[Conversions into United States currency on basis of mark=23.8 cents]

Year	Net profits		Rate of dividend (per cent)
	German currency	United States currency	
	<i>Marks</i>		
1924.....	129,556	\$30,834	-----
1925.....	209,953	47,827	10
1926.....	878,026	208,970	10
1927.....	903,875	215,122	10
1928.....	1,060,802	252,471	10
1929.....	2,109,802	502,133	10
1930.....	2,137,136	508,638	8
1931.....	583,000	138,754	0

It will be observed that in two out of eight years the bank made a profit of over 2,000,000 marks (\$476,000) annually and that up to last year it paid handsome dividends.

Volksbank.—The managing board of the Volksbank is composed of 10 members, all of whom are connected with the Christian labor unions and the Christian consumers' cooperatives. Profits were 127,133 marks (\$30,258) in 1930, but a loss of 170,827 marks (\$40,657) was sustained in 1931. No dividends have been declared for the last two years. The clients of the Volksbank are identical with the membership of the unions and the enterprises served by it.

Wirtschaftsbank.—The Wirtschaftsbank is owned principally by the Hirsch-Duncker democratic labor unions, but a number of shares are also owned by private individuals closely connected with these labor unions. The managing board is made up of five independent business men and one labor union official.

The clients of the Wirtschaftsbank are largely the labor unions and the members of the Hirsch-Duncker group.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in October, 1932

DATA regarding industrial disputes in the United States for October, 1932, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in each year from 1927 to 1931, the number of workers involved and man-days lost for these years and for each of the months, January, 1931, to October, 1932, inclusive, as well as the number of disputes in effect at the end of each month and the number of workers involved. The number of man-days lost, as given in the last column of the table, refers to the estimated number of working-days lost by workers involved in disputes which were in progress during the month or year specified.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1931, TO OCTOBER, 1932, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927 TO 1931

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost in disputes existing in month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total	734	-----	349,434	-----	37,799,394
1928: Total	629	-----	357,145	-----	31,556,947
1929: Total	903	-----	230,463	-----	9,975,213
1930: Total	653	-----	158,114	-----	2,730,368
1931: Total	894	-----	279,299	-----	6,386,183
1931					
January	57	19	10,150	2,905	181,169
February	52	29	20,473	10,677	223,660
March	49	26	26,453	28,012	476,904
April	73	39	27,135	22,687	770,512
May	115	46	28,000	15,603	400,509
June	90	47	18,795	15,223	511,926
July	73	51	49,434	56,683	612,864
August	79	36	11,019	14,759	1,157,013
September	117	65	36,092	37,427	493,649
October	77	45	34,384	29,380	1,052,095
November	62	39	13,219	13,690	355,818
December	50	21	4,145	1,318	150,064
1932					
January	79	37	11,105	4,648	117,298
February	50	30	31,140	28,691	417,966
March	51	28	31,966	11,660	685,949
April	73	34	17,707	20,066	572,121
May	79	43	43,403	49,232	1,220,202
June	64	38	16,010	23,540	927,996
July	58	37	19,657	32,597	700,985
August	72	35	27,749	27,199	728,201
September ¹	75	41	16,989	7,259	539,941
October ¹	34	41	9,065	4,505	159,197

¹ Preliminary figures subject to change.

Occurrence of Disputes

TABLE 2 gives, by industrial groups, the number of strikes beginning in August, September, and October, 1932, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AUGUST, SEPTEMBER, AND OCTOBER, 1932

Industrial group	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	August	September	October	August	September	October
Auto, carriage, and wagon workers.....			1			400
Bakers.....		1	1		6	6
Barbers.....		1			170	
Broom and brush workers.....		1			85	
Building trades.....	12	8	5	336	364	251
Chauffeurs and teamsters.....	1	3	1	19	138	60
Clothing.....	24	14	5	18,959	8,472	2,198
Electrical and gas appliance workers.....		1			15	
Farm labor.....			1			150
Fishermen.....	1			1,500		
Food workers.....	1	3	1	21	103	500
Furniture.....	4	5		1,073	563	
Hotel and restaurant workers.....		1			46	
Iron and steel.....		1			99	
Laundry workers.....	1			700		
Leather.....		1	1		20	50
Longshoremen.....		1			65	
Metal trades.....		2	1		317	200
Miners.....	4	1	5	595	190	1,325
Motion-picture operators, actors, and theatrical workers.....	1	5	1	10	103	10
Printing and publishing.....	3	2		147	816	
Rubber.....			1			50
Steamboatmen.....		1			60	
Street-railway workers.....			1			207
Municipal workers.....			1			2,000
Textiles.....	15	18	6	2,969	4,896	776
Other occupations.....	5	5	2	1,420	461	882
Total.....	72	75	34	27,749	16,989	9,065

Size and Duration of Disputes

TABLE 3 gives the number of industrial disputes beginning in October, 1932, classified by number of workers and by industrial groups.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, 1932, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIAL GROUPS

Industrial group	Number of disputes beginning in October, 1932, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Auto, carriage, and wagon workers.....			1		
Bakers.....	1				
Building trades.....	1	3	1		
Chauffeurs and teamsters.....		1			
Clothing.....	1	3			1
Farm labor.....			1		
Food workers.....				1	
Leather.....		1			
Metal trades.....			1		
Miners.....		1	4		
Motion-picture operators, actors, and theatrical workers.....	1				
Rubber.....		1			
Street-railway workers.....			1		
Municipal workers.....					1
Textiles.....		3	3		
Other occupations.....		1		1	
Total.....	4	14	12	2	2

In Table 4 are shown the number of industrial disputes ending in October, 1932, by industrial groups and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN OCTOBER, 1932, BY INDUSTRIAL GROUPS AND CLASSIFIED DURATION

Industrial group	Classified duration of strikes ending in October, 1932			
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 and less than 3 months
Barbers.....			1	
Building trades.....	2			2
Chauffeurs and teamsters.....	1			
Clothing.....	1	4		1
Electrical and gas appliance workers.....	1			
Fishermen.....			1	
Hotel and restaurant workers.....	1			
Leather.....			1	
Miners.....	3		1	
Motion-picture operators, actors, and theatrical workers.....	1		1	
Rubber.....	1			
Municipal workers.....	1			
Textiles.....	5	2		1
Other occupations.....	2			
Total.....	19	6	5	4

Conciliation Work of the Department of Labor in October, 1932

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 64 labor disputes during October, 1932. These disputes affected a known total of 14,831 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

There were 30 cases involving the law on the prevailing rate of wages. In these cases it is not always possible to show the number involved, due to lack of information as to total number required before completion of construction.

On November 1, 1932, there were 20 strikes before the department for settlement and, in addition, 45 controversies which had not reached the strike stage. The total number of cases pending was 65.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF OCTOBER, 1932

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
<i>Disputes involving Government construction</i>					1932 Sept. 30	1932 Oct. 2	150	500
Post-office building, Minneapolis, Minn.	Controversy	Common labor	Prevailing wages	Adjusted. Rate fixed at 65 cents per hour.	Oct. 1	Oct. 11	160	240
Veterans' hospital, Cheyenne, Wyo.	do	Carpenters and laborers.	do	Adjusted. Rates at \$1 per hour for carpenters, 40 to 50 cents for laborers.	Oct. 3	do	10	---
Post-office building, Easthampton, Mass.	do	Building crafts	Employment of local workers.	Adjusted. Local men largely employed.	Sept. 1	Oct. 15	30	---
Post-office building, Norristown, Pa.	do	do	Prevailing-wage investigation	Adjusted. Rate for carpenters fixed at 87½ cents per hour.	Oct. 1	Oct. 19	12	100
Veterans' hospital, Aspinwall, Pa.	Strike	Carpenters	Working conditions and local labor.	Adjusted amicably	Oct. 5	Oct. 21	12	---
Government warehouse, Alameda, Calif.	Controversy	Reinforced concrete workers.	Prevailing wages	Adjusted. Rates fixed at \$9 per day.	do	do	150	---
Buildings, Hamilton Field, Calif.	do	Electricians and ironworkers.	do	Pending	Oct. 4	Oct. 11	12	13
Immigration Station, Ellis Island, N. Y.	do	Boilermakers, bricklayers, and steam fitters.	Violation of prevailing-wage law.	Adjusted. Boilermakers, \$1.40 per hour; bricklayers, \$13.20 per day; steam fitters, \$11.20 per day.	Oct. 10	do	(1)	---
Veterans' hospital, Muskogee, Okla.	do	Painters	Prevailing wage not paid	Pending	Sept. 5	Oct. 6	10	65
St. Elizabeth's Hospital, Anacostia, D. C.	do	Tile and terrazzo workers, helpers, and rubbers.	Prevailing-wage investigation	Adjusted. Rate of 75 cents per hour fixed by Secretary of Labor.	Oct. 8	do	(1)	---
Post-office building, Sturgis, Mich.	do	Building workers	Violation of prevailing-wage law	Pending	Oct. 10	Oct. 14	5	32
Post-office building, Lawrence, Mass.	Strike	Plasterers	Misunderstanding of prevailing wages.	Adjusted. Agreement of parties.	Oct. 12	Oct. 20	7	50
Post-office building, Jacksonville, Fla.	Controversy	Ironworkers and mill men.	Jurisdiction of installation of conveyor system.	Adjusted. Ironworkers' allowed \$1 per hour and jurisdiction settled.	Oct. 15	Nov. 7	6	26
Post-office building, Barberton, Ohio.	do	Carpenters	Prevailing wages	Adjusted. Local men employed at 75 cents per hour.	Oct. 19	Oct. 19	6	25
Veterans' hospital, Aspinwall, Pa.	Strike	Painters	Working conditions	Adjusted. Satisfactory settlement.	do	do	2	---
Do	do	Cement finishers	do	do	do	do	do	do

Building, Fort Logan, Colo.	Controversy	All crafts	Less than prevailing rate of wages being paid.	Adjusted. Wage rates set by Secretary of Labor for all crafts.	Oct. 17	Nov. 7	30
Post-office building, Okmulgee, Okla.	do	Plasterers	Prevailing-wage investigation	Adjusted. Rate fixed at \$1 per hour.	Oct. 18	Oct. 18	18
Post-office building, New Castle, Wyo.	do	Building workers	Wages alleged to be 20 to 30 per cent below near-by cities.	Adjusted. Agreed to raise rates 15 per cent.	Oct. 19	Oct. 24	(1)
Post-office building, Rockford, Ill.	do	Bricklayers	Protest letting labor-only contract.	Adjusted. Satisfactorily settled.	Oct. 18	Oct. 20	30
Buildings, Patterson Field, Ohio	do	Building workers	Prevailing wages	Pending	Oct. 8	Oct. 20	100
Post-office building, Washington, D. C.	do	Carpenters	Jurisdiction of sheet piling installation.	Adjusted. Agreed on 1 additional carpenter (making 5) and 2 ironworkers.	Oct. 5	Oct. 18	5
Post-office building, Roswell, N. Mex.	do	Common laborers and carpenters.	Prevailing wages	Adjusted. Carpenters 62½ to 75 cents per hour; laborers 25 to 35 cents; mechanics' helpers, 50 cents.	Oct. 6	do	25
Post-office building, Urbana, Ohio.	do	Carpenters	do	Pending	Oct. 22	Oct. 17	(1)
Post-office building, Gloucester, Mass.	Threatened strike.	Hoisting engineers	Working conditions	Adjusted. Satisfactory settlement.	Oct. 1	Oct. 17	36
Post-office building, Hamilton, Ohio.	Controversy	Bricklayers	Employment of local workers	Adjusted. Local men to be employed.	do	Oct. 20	9
Soldiers' Home, Roseburg, Ore.	do	Steam-shovel operators and engineers.	Prevailing wages and alleged violation of 8-hour law.	Adjusted. Prevailing wages being paid.	Oct. 15	Nov. 7	5
Post-office building, Dubuque, Iowa.	do	Common laborers and ironworkers.	Posted rates below those prevailing.	Pending	Oct. 19	do	(1)
Veterans' hospital, Fort Snelling, Minn.	do	Common laborers	Prevailing wages	Adjusted. Rate fixed at 55 cents per hour for building laborers	Sept. 15	Oct. 2	35
Do.	do	Marble, tile, and terrazzo workers	do	Pending	Nov. 1	do	(1)
Parcel Post building, Jacksonville, Fla.	do	Plumbers and steam fitters.	Paid less than prevailing wages	Adjusted. Allowed and paid difference.	Oct. 1	Oct. 20	8
Veterans' hospital, Aspinwall, Pa.	Strike	Carpenters	Prevailing wages	Pending	Oct. 25	do	12
Building, Sunnyvale, Calif.	Controversy	Bricklayers and hod carriers.	Prevailing wages not being paid	Adjusted. Contract canceled. Subcontractor proceeding with job.	Sept. 3	Oct. 14	10
Building, Fort Mifflin, Philadelphia, Pa.	do	Carpenters and sheet-metal workers.	Prevailing-wage investigation on three buildings being improved.	Adjusted. Rates fixed by Secretary of Labor.	Oct. 17	Oct. 28	30
Post-office building, Brockton, Mass.	do	Ironworkers	Prevailing wages and local men	Adjusted. Rates satisfactorily settled.	Oct. 28	Nov. 7	135
Marine Hospital, New Orleans, La.	do	Bricklayers	Prevailing wages not being paid	Adjusted. (Terms not yet received.)	do	Nov. 4	(1)
Post-office building, Norwich, N. Y.	do	Carpenters	Paying 40 to 50 cents per hour; prevailing wage alleged 80 cents.	Adjusted. Satisfactory rates posted on job.	Oct. 26	Nov. 7	9
Buildings, Fort Bliss, Tex.	do	All crafts and laborers.	Prevailing-wage dispute	Adjusted. Rates fixed by Secretary of Labor.	Oct. 20	Oct. 26	50
Post-office building, Macon, Ga.	do	Building workers	do	Pending	Oct. 31	do	(1)
Soldiers' Home, Leavenworth, Kans.	do	Steam fitters and boilermakers.	Prevailing wages and local men	Adjusted. Resident mechanics employed at prevailing wages.	Oct. 1	Oct. 27	25

¹ Not reported.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF OCTOBER, 1932—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
<i>Disputes, other than Government construction</i>					1932	1932		
Longshoremeh, South Haven, Mich.	Strike	Longshoremeh	(1)	Pending	Oct. 1		80	25
National Mirror Specialty Co., Springdale, Pa.	do	Employees	Wage cut	Adjusted. Wages and conditions adjusted.	Sept. 30	Oct. 3	5	20
Max Levy, New York City	do	Millinery	Division of work	Adjusted. Compromised	Aug. 6	Sept. 6	17	5
Joseph Immerman, New York City	do	Tailors	Piecework rates	Adjusted. Tailors accepted wage cut, of which part was restored	Sept. 13	Oct. 3	45	5
Coal miners, Coalmont, Ind.	Controversy	Coal miners	Working conditions	Adjusted. Arbitration accepted and awards made.	July 15	Oct. 15	2	28
Schneider Silk Mills, Swoyersville, Pa.	Strike	Silk workers	Asked restoration of former wage cut.	Adjusted. Weavers increased 10 per cent; quillers and winders increased 50 cents per day.	Oct. 7	Oct. 27	125	
American Sportwear Co., New York City.	do	Leather and sheepskin clothing makers.	Wages, hours, and union recognition.	Adjusted. Increased 15 per cent; 44-hour week.	Sept. 26	Oct. 6	27	
Towboat workers, New York Harbor.	Controversy	All workers	Wages and conditions	Adjusted. Captains allowed \$240; chief engineer, \$230; pilots, \$201; firemen, \$75 to \$90; and deck hands, \$80 per month.	Oct. 14	Nov. 7	4,000	
Shell Oil Co., California	do	do	do	Adjusted. Accepted 10 per cent wage cut; one week annual vacation; agreement to run to Sept. 1, 1933.	Oct. 4	Oct. 28	2,200	3,000
Roofers, Des Moines, Iowa	do	Roofers	(1)	Pending	Oct. 14		(1)	
Prospect Hat Co., New York City	Strike	Hatters, blockers, and trimmers.	Asked reinstatement of discharged worker.	Adjusted. Worker reinstated.	Oct. 3	Oct. 13	14	4
Diana Shoe Co., Brooklyn, N. Y.	do	Shoe workers	Asked union recognition	Pending	Oct. 19		45	102
Fishermen, Erie, Pa.	do	Fishermen	Change in working conditions	Adjusted. Accepted companies' terms.	Oct. 8	Oct. 15	100	150
Power house, Sing Sing Prison, Ossining, N. Y.	do	Boilermakers and handy men.	Jurisdiction of boiler work	Adjusted. Satisfactorily settled	Sept. 9	Sept. 13	14	85
Picture operators, Youngstown, Ohio.	Lockout	Picture operators	Wages cut 20 per cent	Adjusted. Accepted cut from \$85 to \$70 per week; continued 1931 conditions.	Sept. 17	Nov. 4	16	38
Regal Doll Mfgs., Trenton, N. J.	Strike	Doll workers	Asked increase of 30 per cent, 9-hour day, and improved conditions.	Adjusted. Increase 15 per cent, 9-hour day, some changes in conditions.	Oct. 17	Oct. 21	864	

Controversy	Metal polishers	Wages cut 13 cents per hour	Pending	Oct. 24	Sept. 19	8
John Van Range Co., Cincinnati, Ohio.	Furniture and mat- tress workers.	Wage rates	Adjusted. Compromised. increase and 44-hour week.	Sept. 13	Sept. 19	11
Diamond Mattress Co., Brooklyn, N. Y.	Knitters	Wages and conditions	Unable to adjust. Operating with reduced force.	Oct. 5	Oct. 15	85
Meyer Dorfman Knitting Mills, Brooklyn, N. Y.	Electrical workers	Proposed cut from \$13.20 to \$12 per day.	Pending	Oct. 17		(1)
Electrical workers, New York City.	Bakers	Signing of agreement	do	May 1		75
Bakers, Altoona, Pa.	Ironworkers	Wages cut from 7 to 12 cents per hour.	do	Oct. 28		200
Johnson Iron Works & Dock Yards, New Orleans, La.	Pattern makers	Men working 12 hours per day	Adjusted. Men agreed to work 12 hours per day until other men could be trained to do the work.	Oct. 24	Nov. 1	10
Clearing Stone Co., Clearing, Ill.	Ironworkers	Wages cut 7 cents per hour	Pending	Oct. 28		307
Todd Dry Dock Yard, New Or- leans, La.						
Total						9,394
						5,437

¹ Not reported.

LABOR CONGRESSES

Convention of Canadian Trades and Labor Congress, 1932

THE forty-eighth annual meeting of the Trades and Labor Congress of Canada was held at Hamilton, Ontario, September 12-17, 1932. Over 330 delegates were in attendance. A review of the proceedings is published in the Canadian Labor Gazette of October, 1932, upon which the digest that follows is based.

During the year preceding the convention notable progress was made in improving standards of health and safety and social conditions by means of legislative acts, according to the report of the executive council. This document also referred to the legislative program of the congress, which was presented to the Dominion cabinet on January 26, 1932. Among the subjects dealt with in this program were: Unemployment and unemployment insurance, technical education, tariff, colonization, land settlements and migration, public ownership of public utilities, banking and credit systems, motor vehicle competition, old-age pensions, pensions for the blind, health insurance, fair wages, hours of labor, disarmament, and legislation to encourage cooperative training.

The executive council recommended, with regard to unemployment insurance, that the convention authorize the council to seek the cooperation of other national organizations and public bodies which are in harmony with the unemployment insurance policies of the congress. It proposed that each such organization be invited to a conference at Ottawa for the purpose of preparing a resolution urging the enactment of legislation providing for a national scheme of contributory unemployment insurance and that this resolution be presented to the Dominion Cabinet in time for action during the next session of Parliament. Following this, trades and labor councils should convene similar gatherings in order to arouse public interest in the resolution and gain the support of the local members of Parliament.

Resolutions Adopted

A RÉSUMÉ of some of the resolutions adopted by the congress is given below.

Unemployment insurance and unemployment relief.—Approved the executive council's recommendation and five resolutions requesting the establishment of contributory unemployment insurance; called for immediate action on unemployment insurance and benefits sufficient for a satisfactory standard of living; favored adequate maintenance for the unemployed in all localities and to this end urged local labor councils to aid in obtaining more assistance from the Federal and Provincial Governments.

Old-age pensions.—Recommended a reduction of pensionable age from 70 to 65 years, a substantial increase in the present income limit of \$360 per annum, and the repeal of the 5-year provincial residence requirement, leaving only that of 20 years' residence in the

Dominion; also urged establishment of a national system of old-age pensions.

Mothers' allowances.—Recommended continued efforts for mothers' allowance laws in Provinces without such legislation, and the amendment of the Ontario act requirement of two years' residence in the Province immediately preceding application for allowance.

Workmen's compensation.—Urged the appointment of a member of the Trades and Labor Congress on the Workmen's Compensation Board of Quebec; the expansion of the list of industrial diseases under the Quebec act and inclusion of the restaurant, etc., employees under that act; amendment of the Ontario act to bring under Schedule 1 all institutions, corporations, and industries, and of the regulations of the act so as to cover silicosis and similar affections of the lungs.

Health insurance and safety.—Favored a system of health insurance; expressed opposition to the unrestricted use of poisonous materials in paint-spraying machines and recommended protective legislation for workers on these machines; urged legislation regulating sanitary conditions in barber shops, governing the erection and operation of mechanical hoists, prohibiting the establishment of printing offices in private houses, and forbidding the employment of females and inexperienced males in the operation of power paper-cutting machines.

Minimum wage.—Recommended extension of powers of all minimum wage boards, to enable them to regulate the hours of workers included under minimum wage acts, and of those of the Quebec commission to enable them to recover any difference between the wages paid and the minimum scale.

Fair wages.—Requested the debarment from Government undertakings of contractors failing to pay the regular scale of wages on relief work conducted for Governments or municipalities, until such contractors come to an understanding with the labor unions concerned; requested the passage of "fair wage" laws in each Province, and, pending such action in Quebec, requested that Government to include in its order on the subject "all departments of the provincial government as well as other public bodies."

Shorter work day and week.—Recommended a reduction of working hours and a proportionate increase in the wage scale; requested, pending establishment of the 5-day week, action to prevent workers from being compelled to labor seven days per week; urged the amendment of the maximum 60-hour week provision of the Ontario factory act, and the inclusion of hotels under that act.

Other subjects.—Among other resolutions adopted by the convention was one petitioning the Federal Government to initiate an investigation into the coal business, retail prices, etc.; one urging an amendment to the Ontario mechanics' lien act, to give workmen additional protection and facilitate the collection of wages due; one favoring an amendment to the bankruptcy and banking acts so as to make wage claims a first charge; and one recommending legislation against the double duty of workers on street cars.

Officers for 1932-33

For the fourteenth consecutive term, Tom Moore was reelected president, and P. M. Draper will continue to serve as secretary-treasurer.

The 1933 convention will be held in Windsor, Ontario.

LABOR AGREEMENTS, AWARDS, AND DECISIONS

Agreement Establishing 5-Day Week for Printers in Chicago

THE joint committee representing the Franklin Association of Chicago and the closed shop employers of Chicago, and the job scale committee of the Chicago Typographical Union No. 16, have agreed to modify their original agreement, dated October 1, 1929, and expiring September 30, 1934, as follows:

Effective with the day shift on Monday, September 19, 1932, and continuing till the close of business on Saturday, March 18, 1933, the wage scale for members of Chicago Typographical Union No. 16 shall be \$1.22½ per hour for day work and \$1.40 per hour for night work.

SEC. 31. The scale on all linotype and monotype machine work, for both operators and machinists, in all offices other than those working under a newspaper scale, and a party to that scale, shall be as follows: \$1.40 above the day and night scales, respectively. Third shifts shall be paid the night scale.

Forty hours shall constitute a week's work for all members of Typographical Union No. 16. Six-day operation without penalty shall be optional with the employer, in accordance with the provisions of the original contract hereinbefore referred to.

Thirty days prior to the expiration of this supplemental agreement the committees representing the parties hereto shall meet and endeavor to reach an agreement to cover the subsequent 6-month period; provided, in the event no agreement has been reached before the expiration of this supplemental agreement, the wages and hours provided in the original agreement shall become immediately operative.

All matters not specifically covered by this supplemental agreement shall be governed by the original agreement hereinbefore referred to.

There shall be no registration of apprentices from September 19, 1932, to September 30, 1934.

By the terms of the original agreement the 44-hour week would have been effective from September 1, 1932, to March 31, 1933, after which date the 40-hour week would be effective to September 30, 1934.

Agreement in Upholstery Industry in Philadelphia

AN agreement was entered into April 8, 1932, by the Upholstery Weavers and Workers' Union No. 25 and the Philadelphia Upholstery Manufacturers' Association, after more than three months' continuous negotiations.

One of the most interesting provisions of the contract is the following sliding scale of wages: Short runs of 5 yards or less to be paid for as time work; runs of 5 to 30 yards, base piece rate plus 15 per cent; runs of 30 to 100 yards (provided at least 35 yards are woven), base piece rate; and runs of more than 100 yards (provided at least 110 yards are woven), base piece rate less 15 per cent. The theory of the sliding scale is that on short runs, where there is less competition, the manufacturers can afford to pay higher wages and charge higher

prices and the weavers need higher pay because of the lack of full-time employment. On long runs the manufacturer must be in a position to produce more cheaply, while weavers can afford to work at lower rates because the lower rates will be compensated for by steadier employment.

The establishment of collective-bargaining machinery, with an impartial chairman whose decisions shall be obligatory and binding on all parties, is another feature of this agreement.

Another provision establishes an unemployment insurance fund, to which each employer will contribute 2 per cent of his weekly pay roll and each weaver 1 per cent of his weekly wage.

The 2-loom system of operation is permitted by the terms of this agreement, under certain conditions and under a wage scale whereby the weaver may earn about 10 per cent more on two looms than he could earn on one loom. No weaver is to be taken off the pay roll because of the introduction of the 2-loom system.

The number of work hours per week has been reduced during a portion of the year. From September 1 to May 31, inclusive, 48 hours constitute a week's work divided into five and one-half days. From June 1 to August 31, inclusive, 40 hours constitute a week's work, divided into five 8-hour days.

A system for sharing work is also provided, as follows:

Whenever it becomes necessary for an employer to lay off weavers because of lack of work, whatever work is available shall be shared among the weavers according to the list system.

Under this system the weavers on the pay roll shall be listed; and beginning with the top of the list, the number of weavers for whom work is available shall be employed for the number of days the mill is operating during the week in question. Such employment shall constitute a turn. During the following week the weavers next on the list shall be similarly employed in their turn, each group taking its place at the bottom of the list when it has had its turn at employment.

When it is found that 25 per cent of the weavers in a mill have had no employment for one week, such mill shall operate on what it is known as the rotary system and shall continue so to operate until such time as this condition is remedied, the number of days of employment to constitute a turn, as above.

The Bureau of Labor Statistics is in receipt of a letter, dated November 1, 1932, from the financial secretary of the Upholstery Weavers and Workers' Union, which is in part as follows:

There have been many changes in the agreement since the time it went into effect, due to the economic condition of the industry.

The sliding scale was eliminated because it did not prove practical.

The impartial chairman has been temporarily set aside until business has increased. This was jointly agreed upon after several attempts were made to secure an impartial chairman and we were unsuccessful due to chaotic conditions of the industry. It is to be tried again at some future date.

The collections for the unemployment insurance have not started at date because the manufacturers claim they can not afford it because the majority of the plants are running about 10 per cent capacity.

Wage Reduction for Printers in Cleveland Made by Award

THE newspaper publishers of Cleveland and the Typographical Union No. 53, having agreed on all the terms and conditions of a new contract, except the scale of wages, submitted the wage scale to arbitration. Daniel E. Morgan was chairman of the arbitration board.

The publishers demanded a reduction of 19.17 per cent in the wage scale provided in the 3-year agreement which expired May 1, 1931, basing their demand on the decrease in the cost of living since June 2, 1928, the effective date of the expired agreement, and the substantial reduction in the income of the publishers from advertising.

The union requested a continuance of the former wage scale and contended that Cleveland printers have been poorly paid and that their wages are now out of line with those in cities of similar size.

The publishers' brief pointed out that during the period June 2, 1928, to December 31, 1931, the cost-of-living figures of the United States Bureau of Labor Statistics showed a decrease of 14.9 per cent and that Babson's report dated June 23, 1932, showed another decrease of 5 per cent in the cost of living for 1932.

The union's brief disclosed that the regular union dues of the members are 3 per cent of their wages. From this income the union maintains local sick and mortuary benefits, and old-age pensions, and pays its dues to the International Typographical Union, which maintains a home and sanitarium for aged and tuberculous members. The members of the local union also contribute an additional 7 per cent of their wages for the relief of those members who are out of work.

The opinion of the chairman was in part as follows:

While the cost of living is an important fact in an arbitration proceeding involving a wage scale, it does not follow that wages should be reduced by the same percentage as the cost of living may be found to have fallen during any given period.

It is usually true, when prices and costs are rapidly advancing, that wages do not keep step with, but rather lag behind the advance in the cost of living. It is a compensating fact that in a time of rapidly falling prices, wages usually do not fall with the same rapidity, especially in those cases where both parties are able to bargain on substantially equal terms.

Furthermore, if the sole criterion of what should be the wage scale at any given time is the cost of certain necessities of life, there could be little, if any, advance in the standard of living of the wage earner. * * * He should be able to secure, under ordinary conditions, not only a "living," but also a "saving" wage, which will enable him not only to live decently, but also to educate his children and to set aside something for old age, sickness, and the proverbial "rainy day."

I think that reasonable union dues should be considered as a legitimate expense in considering a wage scale and unemployment is a fair charge upon industry. In the absence of any form of unemployment insurance the voluntary determination of the members of the union to assess the membership 7 per cent of wages received, to provide relief in these depressing times, should be considered in determining whether or not the reduction of wages should be equal to the reduction in the cost of living.

Representatives of the union have brought to the attention of the arbitrator recent newspaper clippings indicating some revival in business and in the security markets and showing that prices have advanced recently in some products entering into the cost of living, such as beef and pork. These signs are encouraging and it is hoped that they do not prove to be a mirage arousing expectations soon to be falsified by the progress of events. A conclusion can not be based on these reports because they are so recent and because many of the newspaper clippings obviously are inspired by a desire to assist in restoring public confidence and in reestablishing public morale. I can not forget that there have been a number of false starts in the last three years, loudly heralded at the time they occurred, only to prove disappointing in the end.

The award rendered July 27, 1932, made the following reductions in the wage scale, to be effective for 15 months from and after July 1, 1932: Day work, present scale \$53.55, reduced to \$51.07 per week; night work, present scale \$58.95, reduced to \$56.25 per week; and lobster shift, present scale \$60.48, reduced to \$57.54 per week.

HOUSING

Building Permits in Principal Cities of the United States, October, 1932

THERE was an increase of 2.3 per cent in indicated expenditures for total building operations in 351 cities having a population of 25,000 or over, from which reports were received by the Bureau of Labor Statistics of the United States Department of Labor for the months of September and October, 1932.

The cost figures in the following tables apply to the cost of the building as estimated by the prospective builder on applying for his permit to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are shown. The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Comparisons, September and October

TABLE 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 351 identical cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 351 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN SEPTEMBER AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	September, 1932	October, 1932	Per cent of change	September, 1932	October, 1932	Per cent of change
New England.....	\$907,800	\$843,180	-7.1	\$2,279,599	\$1,026,974	-54.9
Middle Atlantic.....	2,622,960	2,329,481	-11.2	2,800,074	4,477,337	+59.9
East North Central.....	1,206,258	1,039,539	-13.8	3,641,674	1,940,810	-46.4
West North Central.....	782,971	647,429	-17.3	1,752,532	1,344,096	-23.3
South Atlantic.....	861,850	903,863	+4.9	1,502,197	1,547,875	+3.0
South Central.....	630,879	569,949	-9.7	913,162	3,924,688	+329.8
Mountain and Pacific.....	2,120,433	1,643,126	-22.5	1,059,565	1,452,925	+37.1
Total.....	9,133,151	7,976,567	-12.7	13,948,803	15,414,705	+10.5

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	September, 1932	October, 1932	Per cent of change	September, 1932	October, 1932	Per cent of change	
New England.....	\$830,995	\$882,729	+6.2	\$4,018,394	\$2,752,883	-31.5	52
Middle Atlantic.....	2,890,412	3,479,906	+20.4	8,313,446	10,286,724	+23.7	71
East North Central.....	1,550,719	1,477,411	-4.7	6,398,651	4,157,760	-35.0	94
West North Central.....	558,539	486,065	-13.0	3,094,042	2,477,590	-19.9	25
South Atlantic.....	1,079,800	1,127,324	+4.4	3,443,847	3,579,062	+3.9	39
South Central.....	555,136	531,563	-4.2	2,099,177	5,026,200	+139.4	33
Mountain and Pacific.....	1,208,533	1,122,185	-7.1	4,388,531	4,218,236	-3.9	37
Total.....	8,674,134	9,107,183	+5.0	31,756,088	32,498,455	+2.3	351

There was a decrease of 12.7 per cent in indicated expenditures for new residential buildings, comparing October with September, 1932. Decreases were shown in this class of building in six of the seven geographic divisions. Indicated expenditures for new nonresidential buildings increased in three of the geographic divisions, and decreased in four divisions. The estimated cost of additions, alterations, and repairs was greater in three divisions and less in four divisions. Comparing October permits with September permits, total construction showed an increase in three divisions and a decrease in four divisions.

Table 2 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 351 identical cities of the United States, by geographic divisions.

TABLE 2.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 351 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN SEPTEMBER AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	Sep-tem-ber, 1932	Octo-ber, 1932	Sep-tem-ber, 1932	Octo-ber, 1932	Sep-tem-ber, 1932	Octo-ber, 1932	Sep-tem-ber, 1932	Octo-ber, 1932
New England.....	183	166	623	663	2,223	2,165	3,029	2,994
Middle Atlantic.....	491	433	1,511	1,584	4,526	4,353	6,528	6,370
East North Central.....	275	200	1,499	1,464	2,778	2,413	4,552	4,077
West North Central.....	236	187	819	802	1,124	941	2,179	1,930
South Atlantic.....	220	237	499	562	2,689	2,882	3,408	3,681
South Central.....	262	237	468	411	1,965	1,822	2,695	2,470
Mountain and Pacific.....	582	511	1,245	1,206	3,686	3,602	5,513	5,319
Total.....	2,249	1,971	6,664	6,692	18,991	18,178	27,904	26,841
Per cent of change.....		-12.4		+0.4		-4.3		-3.8

Decreases in the number of new residential buildings, of additions, alterations, and repairs, and of total building construction were shown when comparing October permits with September permits. There was a slight increase in the number of new nonresidential buildings for which permits were issued for this period.

Table 3 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the estimated cost of such dwellings for which permits were issued in 351 identical cities during September and October, 1932, by geographic divisions.

HOUSING

1379

TABLE 3.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 351 IDENTICAL CITIES IN SEPTEMBER AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	September, 1932	October, 1932	September, 1932	October, 1932	September, 1932	October, 1932	September, 1932	October, 1932
New England.....	\$793,300	\$755,180	168	153	\$98,500	\$61,500	25	20
Middle Atlantic.....	1,828,665	1,675,531	401	377	579,495	342,300	159	88
East North Central.....	1,093,058	837,107	261	186	57,300	65,432	18	18
West North Central.....	779,471	613,979	235	181	3,500	9,750	2	6
South Atlantic.....	788,550	854,713	209	228	3,800	24,650	7	10
South Central.....	542,364	456,327	247	222	44,950	35,372	23	17
Mountain and Pacific.....	1,756,943	1,265,136	534	451	163,790	218,898	61	88
Total.....	7,582,351	6,458,023	2,055	1,798	951,335	757,902	295	247
Per cent of change.....		-14.8		-12.5		-20.3		-16.3

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	September, 1932	October, 1932	September, 1932	October, 1932	September, 1932	October, 1932	September, 1932	October, 1932
New England.....	\$16,000	\$26,500	8	10	\$907,800	\$843,180	201	183
Middle Atlantic.....	214,800	278,800	74	89	2,622,960	2,296,681	634	554
East North Central.....	52,000	43,000	17	11	1,202,358	945,539	296	215
West North Central.....	0	23,700	0	12	782,971	647,429	237	199
South Atlantic.....	69,500	24,500	29	16	861,850	903,863	245	254
South Central.....	43,565	11,800	12	14	630,879	503,499	282	253
Mountain and Pacific.....	157,700	159,092	89	78	2,078,433	1,643,126	684	617
Total.....	553,565	567,392	229	230	9,087,251	7,783,317	2,579	2,275
Per cent of change.....		+2.5		+0.4		-14.3		-11.8

There was a decrease in the indicated expenditures and in the number of families provided for in 1-family dwellings, 2-family dwellings, and all kinds of dwellings, comparing October with September. The estimated cost of apartment houses and the number of families provided for, however, showed small increases in this class of dwelling. The total number of family-dwelling units provided decreased 11.8 per cent in October as compared with September.

Table 4 shows the index number of families provided for, the index numbers of indicated expenditures for new residential buildings, for new nonresidential buildings, for additions, alterations, and repairs, and for total building operations.

TABLE 4.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES

[Monthly average, 1929=100]

Month	Families provided for	Estimated cost of—			
		New residential buildings	New non-residential buildings	Additions, alterations, and repairs	Total building operations
October..... 1929	64.4	61.6	107.9	115.2	85.7
October..... 1930	58.3	44.9	53.5	58.1	49.7
October..... 1931	33.7	25.4	34.8	39.8	30.8
January..... 1932	14.4	10.2	25.0	25.8	18.2
February.....	13.0	9.1	16.5	26.7	14.3
March.....	15.4	10.7	18.1	27.0	15.7
April.....	13.4	9.7	25.0	32.0	18.8
May.....	11.3	7.9	39.3	27.3	23.3
June.....	10.6	7.9	24.6	28.2	17.3
July.....	8.2	5.6	16.1	22.6	12.0
August.....	9.7	6.8	15.7	24.9	12.6
September.....	10.8	7.5	11.4	21.7	10.7
October.....	9.5	6.6	12.6	22.8	11.0

There was a decrease in the index number of families provided for and in the index numbers of new residential buildings and of total building operations. Index numbers for new nonresidential buildings and for additions, alterations, and repairs, however, showed slight increases.

Comparisons of Indicated Expenditures for Public Buildings

TABLE 5 shows the value of contracts awarded for public buildings by the various agencies of the United States Government and by the various State governments during the months of October, 1931, and September and October, 1932, by geographic divisions.

TABLE 5.—CONTRACTS FOR PUBLIC BUILDINGS LET BY THE UNITED STATES GOVERNMENT AND BY STATE GOVERNMENTS DURING OCTOBER, 1931, AND SEPTEMBER AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	Federal			State		
	October, 1931	September, 1932	October, ¹ 1932	October, 1931	September, 1932	October, ¹ 1932
New England.....	\$429,782	\$605,735	\$485,570	\$725,409	\$51,341	\$71,674
Middle Atlantic.....	1,102,127	829,842	3,113,328	2,226,771	1,656,398	3,340,045
East North Central.....	690,056	2,396,660	727,682	281,599	425,471	221,457
West North Central.....	210,218	163,349	600,594	760,849	86,050	12,956
South Atlantic.....	4,401,280	349,396	362,454	418,352	690,317	121,113
South Central.....	878,501	322,974	1,529,051	419,585	533,421	617,247
Mountain and Pacific.....	2,637,534	829,166	1,409,524	437,605	224,433	211,376
Total.....	10,349,498	5,497,122	8,228,203	5,270,170	3,667,431	4,595,868

¹ Subject to revision.

Contracts awarded by the various Federal agencies during October, 1932, totaled \$8,228,203. The value of contracts awarded by the various State governments totaled \$4,595,868.

Whenever a contract is awarded by either the Federal or a State Government in a city having a population of 25,000 or over, the number or cost of such building is included in the tables shown herein.

Comparisons, October, 1931, With October, 1932

TABLE 6 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 344 identical cities of the United States having a population of 25,000 or over, for the months of October, 1931, and October, 1932, by geographic divisions.

TABLE 6.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 344 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN OCTOBER, 1931, AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	October, 1931	October, 1932	Per cent of change	October, 1931	October, 1932	Per cent of change
New England.....	\$2,830,300	\$735,880	-74.0	\$3,030,172	\$1,012,719	-66.6
Middle Atlantic.....	16,213,545	2,293,881	-85.9	18,325,801	4,333,159	-76.4
East North Central.....	3,088,969	1,039,539	-66.3	4,020,579	1,639,160	-59.2
West North Central.....	1,758,850	647,429	-63.2	1,569,972	1,344,096	-14.4
South Atlantic.....	2,197,189	903,863	-58.9	4,537,983	1,547,875	-65.9
South Central.....	1,396,619	569,949	-59.2	3,441,686	3,924,688	+14.0
Mountain and Pacific.....	4,443,812	1,617,263	-63.6	3,577,252	1,445,458	-59.6
Total.....	31,929,284	7,807,804	-75.5	38,503,445	15,247,155	-60.4

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Num- ber of cities
	October, 1931	October, 1932	Per cent of change	October, 1931	October, 1932	Per cent of change	
New England.....	\$1,102,767	\$870,439	-21.1	\$6,963,239	\$2,619,038	-62.4	49
Middle Atlantic.....	5,865,277	3,457,390	-41.1	40,404,623	10,084,430	-75.0	69
East North Central.....	2,654,926	1,477,381	-44.4	9,764,474	4,156,080	-57.4	93
West North Central.....	696,585	486,065	-30.2	4,025,407	2,477,590	-38.5	25
South Atlantic.....	1,652,057	1,127,324	-31.8	8,387,229	3,579,062	-57.3	39
South Central.....	1,048,029	531,563	-49.3	5,886,334	5,026,200	-14.6	33
Mountain and Pacific.....	1,660,935	1,111,255	-33.1	9,681,999	4,173,976	-56.9	36
Total.....	14,680,576	9,061,417	-38.3	85,113,305	32,116,376	-62.3	344

There was a decrease in the indicated expenditures for both classes of new buildings, for additions, alterations, and repairs, and for total construction, comparing October, 1932, with October, 1931.

Table 7 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 344 cities having a population of 25,000 or over for the months of October, 1931, and October, 1932, by geographic divisions.

TABLE 7.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 344 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN OCTOBER, 1931, AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932
New England.....	404	150	1,133	640	2,357	2,126	3,894	2,916
Middle Atlantic.....	1,457	428	2,688	1,568	5,099	4,302	9,244	6,298
East North Central.....	572	200	2,726	1,461	3,708	2,412	7,006	4,073
West North Central.....	433	187	1,227	802	1,248	941	2,913	1,930
South Atlantic.....	444	237	899	562	3,307	2,882	4,650	3,681
South Central.....	475	237	619	411	2,099	1,822	3,193	2,470
Mountain and Pacific.....	582	511	1,245	1,206	3,686	3,602	5,513	5,319
Total.....	4,372	1,950	10,537	6,650	21,504	18,087	36,413	26,687
Per cent of change.....		-55.4		-36.9		-15.9		-26.7

All geographic divisions show decreases in the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations, comparing these two periods.

Table 8 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the cost of such dwellings, for which permits were issued in 344 identical cities during October, 1931, and October, 1932, by geographic divisions.

TABLE 8.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 344 IDENTICAL CITIES IN OCTOBER, 1931, AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932
New England.....	\$1,762,300	\$647,880	329	137	\$361,300	\$61,500	107	20
Middle Atlantic.....	6,378,620	1,639,981	1,136	372	2,035,025	342,300	501	88
East North Central.....	2,468,569	837,107	526	186	283,900	65,432	63	18
West North Central.....	1,490,300	613,979	404	181	194,050	9,750	54	6
South Atlantic.....	1,787,481	854,713	417	228	27,910	24,650	18	10
South Central.....	1,192,812	456,327	440	222	117,307	35,372	55	17
Mountain and Pacific.....	3,458,602	1,250,573	925	445	364,200	207,598	122	84
Total.....	18,538,684	6,300,560	4,177	1,771	3,383,692	746,602	920	243
Per cent of change.....		-66.0		-57.6		-77.9		-73.6

TABLE 8.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 344 IDENTICAL CITIES IN OCTOBER, 1931, AND OCTOBER, 1932, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932	October, 1931	October, 1932
New England.....	\$666,700	\$26,500	206	10	\$2,790,300	\$735,880	642	167
Middle Atlantic.....	7,799,900	278,800	2,190	89	16,213,545	2,261,081	3,827	549
East North Central.....	286,500	43,000	113	11	3,038,969	945,539	702	215
West North Central.....	74,500	23,700	39	12	1,758,850	647,429	497	199
South Atlantic.....	201,798	24,500	80	16	2,017,189	903,863	515	254
South Central.....	86,500	11,800	60	14	1,396,619	503,499	555	253
Mountain and Pacific.....	596,877	159,092	295	78	4,419,679	1,617,263	1,342	607
Total.....	9,712,775	567,392	2,983	230	31,635,151	7,614,554	8,080	2,244
Per cent of change.....		-94.2		-92.3		-75.9		-72.2

Expenditures for all types of dwellings were much lower in October, 1932, than in October, 1931. The number of family-dwelling units provided in each type of dwellings also showed a large decrease comparing these two months.

Details by Cities

TABLE 9 shows the estimated cost of new residential buildings, of new nonresidential buildings, of total building operations, and the number of families provided for in new dwellings in each of the 351 cities for which reports were received for October, 1932.

No reports were received from New London, Conn.; Central Falls, R. I.; Bangor and Lewiston, Me.; Atlantic City, N. J.; Anderson, Ind.; Port Huron, Mich.; Pensacola and West Palm Beach, Fla.; Fort Smith, Ark.; Ashland and Newport, Ky.; Muskogee and Okmulgee, Okla.; Brownsville and Port Arthur, Tex.; and Everett, Wash.

Permits were issued during October for the following important building projects: In Hamilton, Ohio, for a school building to cost \$242,800; in Dubuque, Iowa, for a public-utility building to cost \$327,000; in Baltimore, Md., for a school building to cost \$725,000; in Louisville, Ky., for a school building to cost \$664,000; in New Orleans, La., for an airport to cost \$550,000; and in Chattanooga, Tenn., for a public-utility building to cost \$850,000.

Contracts were awarded by the Supervising Architect of the United States Treasury Department for a post office in Portland, Me., to cost over \$360,000; for a post office and Federal courthouse in Albany, N. Y., to cost nearly \$1,300,000; for a post office in Binghamton, N. Y., to cost \$450,000; for a Federal office building in Omaha, Nebr., to cost nearly \$500,000; and for a post office and Federal courthouse in Jackson, Miss., to cost nearly \$550,000.

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, OCTOBER, 1932

New England States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for	City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for
Connecticut:					Massachusetts—				
Bridgeport.....	\$45,780	\$6,025	\$59,940	18	Continued.				
Bristol.....	0	1,675	3,315	0	Malden.....	\$4,000	\$1,370	\$14,817	1
Greenwich.....	7,000	6,450	43,350	3	Medford.....	11,000	10,300	24,570	3
Hartford.....	0	4,175	32,171	0	New Bedford.....	11,000	2,575	34,450	3
Meriden.....	21,200	4,846	33,776	6	Newton.....	97,700	14,130	122,220	13
New Britain.....	0	600	22,801	0	Pittsfield.....	24,100	5,600	36,880	5
New Haven.....	24,000	5,650	46,750	4	Quincy.....	17,500	5,990	36,025	5
Norwalk.....	7,800	3,875	20,287	3	Revere.....	2,000	1,500	7,825	1
Stamford.....	13,700	42,700	61,390	2	Salem.....	10,000	10,810	50,045	2
Torrington.....	8,000	4,015	17,975	2	Somerville.....	0	4,020	25,010	0
Waterbury.....	19,500	4,950	27,900	5	Springfield.....	6,500	7,675	30,350	3
West Hartford.....	29,500	6,865	45,445	4	Taunton.....	3,700	2,225	12,052	1
Maine: Portland.....	13,800	371,749	397,476	2	Waltham.....	2,000	830	12,923	1
Massachusetts:					Watertown.....	2,500	900	5,470	1
Arlington.....	64,300	6,290	71,500	9	Worcester.....	10,500	10,383	44,555	3
Beverly.....	5,000	3,280	10,743	1	New Hampshire:				
Boston ¹	92,700	226,375	598,320	20	Concord.....	3,500	1,200	5,700	1
Brockton.....	4,000	3,800	15,455	1	Manchester.....	19,300	131,100	162,990	7
Brookline.....	63,500	1,600	80,399	7	Rhode Island:				
Cambridge.....	0	11,200	51,737	0	Cranston.....	47,900	4,870	55,565	9
Chelsea.....	8,500	1,500	14,545	2	East Providence.....	15,200	9,100	36,887	4
Chicopee.....	3,000	2,700	5,850	1	Newport.....	3,500	6,400	14,160	1
Everett.....	2,500	315	6,215	1	Pawtucket.....	13,700	5,420	24,010	5
Fall River.....	0	4,241	8,230	0	Providence.....	52,750	21,250	179,245	10
Fitchburg.....	0	25	6,664	0	Woonsocket.....	2,000	4,790	12,075	1
Haverhill.....	5,500	27,825	34,300	2	Vermont: Burlington.....	13,500	1,100	16,900	3
Holyoke.....	0	1,500	8,300	0					
Lawrence.....	0	1,600	4,225	0	Total.....	843,180	1,026,974	2,752,883	183
Lowell.....	9,200	3,040	15,965	2					
Lynn.....	20,850	4,570	43,135	5					

Middle Atlantic States

New Jersey:					New York—				
Bayonne.....	0	0	\$8,055	0	Continued.				
Belleville.....	\$6,500	\$1,510	12,235	2	Kingston.....	\$3,000	\$9,035	\$19,073	1
Bloomfield.....	25,000	3,000	33,000	5	Lockport.....	0	0	0	0
Camden.....	8,825	3,700	22,029	1	Mount Vernon.....	14,000	37,260	56,224	2
Clifton.....	41,500	5,000	49,400	14	Newburgh.....	0	11,200	15,610	0
East Orange.....	0	7,050	20,981	0	New Rochelle.....	0	5,610	15,570	0
Elizabeth.....	13,000	2,500	22,400	4	New York City—				
Garfield.....	3,000	1,250	6,100	1	The Bronx ¹	\$213,500	\$124,000	\$507,501	54
Hackensack.....	0	142,428	156,519	0	Brooklyn ¹	239,100	384,540	1,155,073	69
Hoboken.....	0	0	30,868	0	Manhattan ¹	0	22,200	1,102,635	0
Irvington.....	5,400	3,881	16,126	1	Queens ¹	615,700	347,518	1,278,451	163
Jersey City.....	49,000	3,585	84,635	6	Richmond ¹	27,100	16,284	74,074	7
Kearny.....	8,000	50,155	59,305	2	Niagara Falls.....	3,000	10,673	36,056	1
Montclair.....	15,400	1,900	32,898	2	Poughkeepsie.....	24,900	2,775	66,150	5
Newark.....	32,950	19,075	95,805	4	Rochester.....	23,400	69,753	139,997	5
New Brunswick.....	0	575	4,465	0	Schenectady.....	17,600	102,830	137,618	5
Orange.....	0	1,930	9,513	0	Syracuse.....	47,300	7,605	81,205	7
Passaic.....	0	22,400	29,701	0	Troy.....	41,800	5,050	53,210	9
Paterson.....	10,500	2,893	40,878	3	Utica.....	30,000	10,800	43,650	5
Perth Amboy.....	500	7,950	14,590	1	Watertown.....	2,400	925	22,165	1
Plainfield.....	3,200	1,626	13,976	1	White Plains.....	18,500	1,945	33,161	1
Trenton.....	5,900	6,340	29,412	2	Yonkers.....	148,350	131,600	293,060	23
Union City.....	0	15,500	28,995	0	Pennsylvania:				
West New York.....	0	0	6,900	0	Allentown.....	8,000	6,800	24,550	2
West Orange.....	35,600	1,750	45,775	5	Altoona.....	0	5,825	10,782	0
New York:					Bethlehem.....	0	2,675	4,025	0
Albany.....	54,500	1,299,799	1,383,159	8	Butler.....	0	2,650	6,250	0
Amsterdam.....	3,000	6,125	9,125	1	Chester.....	0	975	2,175	0
Auburn.....	0	2,975	4,425	0	Easton.....	0	1,500	2,300	0
Binghamton.....	0	477,324	514,000	0	Erie.....	14,500	54,560	78,175	5
Buffalo.....	19,900	140,357	214,503	7	Harrisburg.....	17,000	15,900	46,925	3
Elmira.....	6,400	24,255	37,347	1	Hazleton.....	4,056	23,034	27,544	1
Jamestown.....	6,300	2,105	11,620	2					

¹ Applications filed.

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, OCTOBER, 1932—Continued

Middle Atlantic States—Continued

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for	City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for
Pennsylvania—Continued.					Pennsylvania—Continued.				
Johnstown.....	\$6, 500	\$1, 620	\$14, 145	2	Reading.....	0	\$2, 600	\$14, 840	0
Lancaster.....	0	4, 950	7, 500	0	Scranton.....	\$9, 100	12, 460	45, 723	3
McKeesport.....	1, 850	1, 485	7, 415	1	Wilkes-Barre.....	22, 350	5, 099	47, 026	6
Nanticoke.....	3, 000	0	3, 250	2	Wilkinsburg.....	0	300	10, 610	0
New Castle.....	0	595	1, 145	0	Williamsport.....	3, 500	192, 839	206, 962	3
Norristown.....	0	5, 407	6, 622	0	York.....	0	8, 975	17, 417	0
Philadelphia.....	318, 900	338, 327	966, 512	82					
Pittsburgh.....	46, 700	228, 160	555, 518	13	Total.....	2, 329, 481	4, 477, 337	10, 286, 724	554

East North Central States

Illinois:					Michigan—Continued.				
Alton.....	0	\$2, 800	\$2, 985	0	Jackson.....	0	\$555	\$3, 563	0
Aurora.....	0	850	2, 380	0	Kalamazoo.....	\$10, 000	4, 820	19, 724	1
Belleville.....	\$8, 200	1, 850	12, 890	6	Lansing.....	0	6, 125	8, 855	0
Berwyn.....	0	5, 225	7, 225	0	Muskegon.....	3, 000	2, 210	6, 455	1
Bloomington.....	0	1, 000	54, 000	0	Pontiac.....	0	2, 030	3, 655	0
Chicago.....	57, 950	226, 052	423, 977	14	Royal Oak.....	0	1, 650	1, 680	0
Cicero.....	0	6, 020	10, 245	0	Saginaw.....	0	10, 280	15, 482	0
Danville.....	7, 777	211	12, 473	1	Wyandotte.....	0	1, 150	2, 650	0
Decatur.....	0	1, 950	2, 645	0	Ohio:				
East St. Louis.....	2, 000	21, 590	26, 515	3	Akron.....	31, 500	11, 325	57, 890	3
Elgin.....	0	1, 238	6, 401	0	Ashtabula.....	0	265	855	0
Evanston.....	106, 000	5, 950	191, 950	2	Canton.....	1, 100	3, 365	6, 165	1
Granite City.....	0	0	0	0	Cincinnati.....	235, 100	90, 355	384, 485	33
Joliet.....	1, 000	12, 000	20, 400	1	Cleveland.....	64, 000	40, 700	515, 450	13
Maywood.....	0	0	3, 200	0	Cleveland Heights.....	24, 400	1, 835	26, 235	4
Moline.....	10, 000	1, 085	14, 146	2	Columbus.....	12, 000	18, 250	83, 550	3
Oak Park.....	14, 000	4, 290	22, 985	3	Dayton.....	8, 500	37, 665	52, 410	3
Peoria.....	31, 300	22, 625	73, 825	5	East Cleveland.....	0	165	1, 540	0
Quincy.....	0	1, 443	3, 293	0	Elyria.....	0	925	5, 625	0
Rockford.....	5, 000	3, 925	17, 425	1	Hamilton.....	0	242, 925	254, 965	0
Rock Island.....	0	17, 275	20, 621	0	Lakewood.....	0	5, 315	7, 640	0
Springfield.....	8, 700	43, 170	64, 694	2	Lima.....	0	7, 540	8, 880	0
Waukegan.....	4, 350	400	12, 410	2	Lorain.....	0	275	675	0
Indiana:					Mansfield.....	17, 200	1, 120	25, 214	4
East Chicago.....	0	125	125	0	Marion.....	500	1, 850	3, 210	1
Elkhart.....	2, 500	1, 060	5, 407	1	Massillon.....	0	100	1, 800	0
Evansville.....	3, 500	14, 951	25, 565	1	Middleton.....	0	550	2, 775	0
Fort Wayne.....	0	54, 169	62, 030	0	Newark.....	4, 200	3, 150	7, 700	2
Gary.....	0	18, 550	19, 750	0	Norwood.....	0	0	3, 920	0
Hammond.....	3, 000	900	11, 020	1	Portsmouth.....	500	782	2, 057	1
Indianapolis.....	40, 650	6, 905	84, 285	12	Springfield.....	3, 095	2, 887	7, 307	3
Kokomo.....	700	53	1, 908	1	Steubenville.....	0	300	2, 300	0
Lafayette.....	3, 500	0	3, 500	1	Toledo.....	2, 000	23, 653	39, 203	1
Marion.....	0	1, 230	5, 863	0	Warren.....	0	885	4, 828	0
Michigan City.....	0	1, 440	1, 915	0	Youngstown.....	4, 000	1, 525	12, 505	1
Mishawaka.....	0	215	215	0	Wisconsin:				
Muncie.....	7, 400	1, 387	13, 724	2	Appleton.....	14, 550	3, 860	20, 100	6
Richmond.....	6, 000	700	9, 000	1	Eau Claire.....	12, 835	3, 400	22, 913	5
South Bend.....	4, 000	7, 580	14, 790	2	Fond du Lac.....	2, 400	3, 610	6, 810	1
Terre Haute.....	4, 000	25, 140	36, 930	1	Green Bay.....	19, 150	131, 700	160, 945	5
Michigan:					Kenosha.....	0	6, 625	12, 450	0
Ann Arbor.....	24, 500	7, 850	42, 275	7	Madison.....	15, 000	2, 550	25, 685	3
Battle Creek.....	2, 800	8, 750	13, 580	1	Milwaukee.....	59, 500	201, 615	370, 591	11
Bay City.....	4, 500	1, 405	12, 888	2	Oshkosh.....	2, 000	1, 550	15, 519	1
Dearborn.....	0	5, 035	7, 780	0	Racine.....	6, 200	550	10, 215	1
Detroit.....	89, 982	93, 735	306, 637	23	Sheboygan.....	15, 500	2, 144	32, 245	4
Flint.....	3, 600	16, 207	31, 692	1	Superior.....	15, 000	2, 698	21, 790	4
Grand Rapids.....	0	18, 540	60, 095	0	West Allis.....	0	84, 105	87, 595	0
Hamtramck.....	0	1, 500	2, 675	0					
Highland Park.....	0	1, 500	9, 320	0	Total.....	1, 039, 539	1, 640, 810	4, 157, 760	215

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, OCTOBER, 1932—Continued

West North Central States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for	City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for
Iowa:					Missouri:				
Burlington...	0	\$75,350	\$75,800	0	Joplin...	0	\$1,700	\$5,500	0
Cedar Rapids...	\$7,000	4,250	22,970	2	Kansas City...	\$31,500	50,150	91,350	8
Council Bluffs...	7,300	3,835	12,025	2	Springfield...	16,950	2,495	29,080	7
Davenport...	15,650	21,548	47,068	7	St. Joseph...	2,550	2,650	5,645	3
Des Moines...	44,425	35,217	101,002	14	St. Louis...	164,469	50,488	352,849	45
Dubuque...	12,000	328,320	348,906	3	Nebraska:				
Ottumwa...	3,500	2,400	33,100	1	Lincoln...	10,550	13,331	41,981	8
Sioux City...	24,500	2,160	29,160	6	Omaha...	28,615	510,112	548,592	10
Waterloo...	15,500	10,340	28,670	3	North Dakota:				
Kansas:					Fargo...	8,500	35,355	104,315	2
Hutchinson...	5,500	1,050	12,610	4	South Dakota:				
Kansas City...	2,700	9,945	15,050	2	Sioux Falls...	20,375	500	24,375	5
Topeka...	4,000	4,805	10,605	1	Total...	647,429	1,344,096	2,477,590	199
Wichita...	18,000	8,632	37,812	7					
Minnesota:									
Duluth...	12,800	5,190	34,495	8					
Minneapolis...	113,625	133,580	316,510	32					
St. Paul...	76,920	30,693	148,720	19					

South Atlantic States

Delaware: Wil-					North Carolina—				
mington...	\$37,000	\$15,695	\$58,956	6	Continued.				
District of Co-					Raleigh...	\$6,105	\$2,600	\$8,705	3
lumbia: Wash-					Wilmington...	3,500	300	8,250	1
ington...	417,800	263,293	803,504	79	Winston-				
Florida:					Salem...	2,800	1,505	14,450	3
Jacksonville...	36,300	26,550	101,510	20	South Carolina:				
Miami...	22,750	29,559	128,084	10	Charleston...	8,680	600	18,796	4
Orlando...	0	6,450	14,133	0	Columbia...	14,318	212	20,914	7
St. Peters-					Greenville...	0	60	7,090	0
burg...	1,200	11,100	32,800	2	Spartanburg...	0	550	2,380	0
Tampa...	8,000	21,455	49,138	6	Virginia:				
Georgia:					Lynchburg...	6,900	160	15,548	4
Atlanta...	33,200	16,110	75,866	16	Newport				
Augusta...	4,500	4,306	16,701	1	News...	4,000	4,120	13,040	1
Columbus...	800	4,250	6,678	1	Norfolk...	29,950	4,080	82,837	11
Macon...	600	3,000	9,186	1	Petersburg...	4,800	32,090	36,890	2
Savannah...	11,000	6,500	19,100	1	Portsmouth...	3,000	230	13,320	3
Maryland:					Richmond...	18,400	7,840	54,610	6
Baltimore...	100,000	967,100	1,663,300	23	Roanoke...	17,385	5,835	27,178	4
Cumberland...	1,800	5,485	10,358	1	West Virginia:				
Hagerstown...	0	680	1,355	0	Charleston...	15,000	3,005	22,509	4
North Carolina:					Clarksburg...	5,200	510	6,010	2
Asheville...	0	270	1,735	0	Huntington...	6,175	80,160	92,345	3
Charlotte...	30,400	1,200	45,061	7	Parkersburg...	0	1,185	3,978	0
Durham...	23,100	8,950	36,150	8	Wheeling...	11,000	3,785	25,434	2
Greensboro...	8,500	495	14,863	2	Total...	903,863	1,547,875	3,579,062	254
High Point...	9,700	6,600	16,300	10					

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, OCTOBER, 1932—Continued

South Central States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for	City and State	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for
Alabama:					Tennessee:				
Birmingham.....	0	\$84,840	\$109,185	0	Chattanooga.....	\$14,875	\$850,000	\$882,422	8
Mobile.....	\$9,230	1,300	42,870	12	Johnson City.....	0	150	1,125	0
Montgomery.....	6,300	0	15,220	4	Knoxville.....	12,075	10,489	24,689	7
Arkansas: Little Rock.....	5,000	4,623	26,870	3	Memphis.....	25,350	8,060	87,750	11
Kentucky:					Nashville.....	8,800	3,084	44,288	10
Covington.....	0	1,700	5,900	0	Texas:				
Lexington.....	61,400	12,245	79,872	1	Amarillo.....	0	2,189	4,892	0
Louisville.....	69,000	672,720	775,745	10	Austin.....	46,735	33,080	97,686	33
Paducah.....	0	50,000	50,000	0	Beaumont.....	1,000	1,000	19,477	1
Louisiana:					Dallas.....	0	20,695	64,982	0
Baton Rouge.....	7,462	23,750	41,123	4	El Paso.....	9,400	8,813	24,575	4
Monroe.....	2,500	0	3,595	1	Fort Worth.....	42,800	39,780	105,815	15
New Orleans.....	11,627	864,081	915,548	5	Galveston.....	10,350	4,162	34,823	9
Shreveport.....	27,950	1,620	56,850	11	Houston.....	121,750	19,000	153,350	49
Mississippi:					San Angelo.....	0	900	5,325	0
Jackson.....	9,225	568,939	585,819	6	San Antonio.....	34,820	25,633	76,305	28
Oklahoma:					Waco.....	15,000	1,085	21,537	10
Enid.....	0	0	5,208	0	Wichita Falls.....	0	150	5,140	0
Oklahoma City.....	12,800	608,300	641,935	5	Total.....	569,949	3,924,688	5,026,200	253
Tulsa.....	4,500	2,300	16,279	6					

Mountain and Pacific States

Arizona:					Colorado:				
Phoenix.....	\$5,180	\$7,350	\$33,390	2	Colorado Springs.....	\$7,690	\$1,475	\$13,810	4
Tucson.....	3,950	11,420	26,079	3	Denver.....	60,500	149,900	277,107	15
California:					Pueblo.....	0	1,400	4,875	0
Alameda.....	3,500	308,808	324,480	2	Montana:				
Alhambra.....	20,700	16,000	38,550	7	Butte.....	0	15	1,140	0
Bakersfield.....	5,540	1,840	17,870	2	Great Falls.....	2,250	150	11,435	2
Berkeley.....	36,670	5,787	61,751	11	New Mexico:				
Fresno.....	20,450	4,340	47,648	5	Albuquerque.....	0	8,715	29,997	0
Glendale.....	30,500	8,290	43,215	6	Oregon:				
Huntington Park.....	12,275	950	14,625	4	Portland.....	59,650	45,370	183,430	17
Long Beach.....	76,125	72,050	186,740	36	Salem.....	5,500	625	11,635	2
Los Angeles.....	640,942	374,290	1,261,750	272	Utah:				
Oakland.....	79,034	30,088	163,825	19	Ogden.....	0	39,432	42,107	0
Pasadena.....	22,750	10,763	91,659	5	Salt Lake City.....	10,000	5,945	34,901	3
Riverside.....	18,301	4,171	30,128	6	Washington:				
Sacramento.....	45,000	19,950	121,540	13	Bellingham.....	2,600	235	7,857	1
San Bernardino.....	3,400	255	5,055	2	Seattle.....	23,770	64,225	133,570	22
San Diego.....	75,918	6,640	134,056	40	Spokane.....	8,875	9,625	27,886	5
San Francisco.....	268,043	166,340	593,400	74	Tacoma.....	3,650	7,020	22,775	4
San Jose.....	13,125	17,935	41,980	5	Total.....	1,643,126	1,452,940	4,219,376	617
Santa Ana.....	3,500	5,250	10,480	1					
Santa Barbara.....	13,588	6,532	30,775	6					
Santa Monica.....	12,200	6,235	28,660	4					
Stockton.....	12,900	10,570	43,101	5					
Vallejo.....	35,050	22,954	66,094	12					

Hawaii

City	New residential buildings	New nonresidential buildings	Total (including repairs)	Families provided for
Honolulu.....	\$98,744	\$23,187	\$143,294	62

Costs of Dwelling Units in Various Cities, as Shown by Building Permits

THIS article presents data, derived from building-permit estimates, showing the cost distribution of dwelling units (i. e., 1-family houses, 2-family houses, and apartments) in 14 selected cities for the year 1931, with comparable data for 1929 in the case of 10 cities.^a The estimates of cost shown in building permits do not include land costs. Also, such estimates may not be identical with final costs of construction, but they are believed to be sufficiently close to permit of such general comparisons as are attempted in this article. Furthermore, it is to be emphasized that dwelling units in the same cost group may differ greatly as to size and type. Because of differences in climate, in popular taste, in material and labor costs, and in building methods, a house in one city with a total building cost of \$5,000 may be very different from a house of similar cost in another city. The figures given must therefore be used with caution, but they do indicate very clearly the variations within and between cities as to the cost of housing accommodations constructed.

One-Family Dwellings

TABLE 1 shows the number and per cent of 1-family dwellings provided for in 10 cities, by cost groups, for the years 1929 and 1931.

TABLE 1.—ESTIMATED COST OF 1-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS

Number of families provided for

Cost group	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	3	7				1	23	19	892	607	1	
\$2,000 and under \$3,000.....	6	2		3	4	7	81	42	1,600	996	1	6
\$3,000 and under \$4,000.....	14	8	3	1	40	20	69	77	1,151	915	34	17
\$4,000 and under \$5,000.....	29	13	3	2	132	75	136	206	460	372	258	82
\$5,000 and under \$6,000.....	193	80	1	3	187	153	123	85	234	143	221	191
\$6,000 and under \$7,000.....	157	348	1		231	154	81	27	175	67	109	88
\$7,000 and under \$8,000.....	167	190			123	91	34	18	106	51	44	27
\$8,000 and under \$9,000.....	61	48			72	49	18	7	63	19	28	16
\$9,000 and under \$10,000.....	21	23		1	45	21	9	2	43	26	14	10
\$10,000 and under \$11,000.....	18	4	3	1	48	17	12	5	63	22	6	1
\$11,000 and under \$12,000.....					7	6	1		26	9	1	1
\$12,000 and under \$13,000.....	22	1	4		26	14	5	3	33	13	5	
\$13,000 and under \$14,000.....	1				6	4	3		17	2		
\$14,000 and under \$15,000.....		1	1		10	9	3	1	17	2	2	1
\$15,000 and under \$16,000.....	10		1	2	10	1	6	1	35	11	2	
\$16,000 and under \$17,000.....	1				6	4		1	12	4		
\$17,000 and under \$18,000.....			1	1	3	3	1		8	7		
\$18,000 and under \$19,000.....	1	1			5	4		1	16	4		
\$19,000 and under \$20,000.....			1		2	2	1		5	3		
\$20,000 and under \$25,000.....	3			1	14	3	5	1	27	15	3	
\$25,000 and under \$30,000.....	3		1	1	6	4	1	1	21	7	2	
\$30,000 and under \$35,000.....		1			3	1		1	8	1	1	
\$35,000 and under \$40,000.....	2				2				7	2	1	
\$40,000 and under \$45,000.....					3	1	1		4	1		
\$45,000 and under \$50,000.....	1		1		3		1		3		1	
\$50,000 and over.....	12				25	32	41		39	64		71
Total.....	715	727	21	16	993	646	615	498	5,035	3,303	734	351

¹ 1 at \$50,000, 1 at \$55,000.

² 2 at \$60,000, 1 at \$67,000, 1 at \$70,000, 1 at \$75,000.

³ 2 at \$60,000.

⁴ 1 at \$150,000.

⁵ 2 at \$50,000, 1 at \$57,000, 2 at \$75,000, 1 at \$82,000, 2 at \$100,000, 1 at \$175,000.

⁶ 1 at \$50,000, 1 at \$61,200, 1 at \$64,500, 1 at \$67,500.

⁷ 1 at \$50,000.

^a Data for the first half of 1929 for certain of these cities were published in the Monthly Labor Review for August, 1931.

TABLE 1.—ESTIMATED COST OF 1-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS—Continued

Number of families provided for—Continued

Cost group	New Haven		Philadelphia		Richmond		St. Paul		Total, 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	2	1	53	3	29	12	4	1,003	654	
\$2,000 and under \$3,000.....	4	1	62	40	39	27	16	18	1,813	1,142
\$3,000 and under \$4,000.....	19	6	1,514	265	58	25	92	73	2,994	1,407
\$4,000 and under \$5,000.....	19	40	1,679	298	80	40	99	86	2,895	1,214
\$5,000 and under \$6,000.....	30	35	441	149	59	18	56	72	1,545	839
\$6,000 and under \$7,000.....	10	11	109	12	35	10	28	29	936	746
\$7,000 and under \$8,000.....	7	11	63	22	28	4	20	12	592	426
\$8,000 and under \$9,000.....	6	10	29	1	7	7	8	6	292	163
\$9,000 and under \$10,000.....	7	6	10	1	4	—	8	1	161	91
\$10,000 and under \$11,000.....	2	1	15	10	9	4	9	7	185	72
\$11,000 and under \$12,000.....	2	1	3	1	—	—	2	—	42	18
\$12,000 and under \$13,000.....	—	3	6	4	3	2	5	—	109	40
\$13,000 and under \$14,000.....	—	1	3	—	2	—	—	—	32	7
\$14,000 and under \$15,000.....	—	—	6	4	1	—	—	—	40	18
\$15,000 and under \$16,000.....	2	—	7	3	1	1	2	3	76	22
\$16,000 and under \$17,000.....	—	—	6	—	3	—	—	1	28	10
\$17,000 and under \$18,000.....	—	—	3	2	—	—	—	—	16	13
\$18,000 and under \$19,000.....	1	—	9	—	—	—	2	1	34	11
\$19,000 and under \$20,000.....	—	—	3	—	—	—	1	—	13	5
\$20,000 and under \$25,000.....	—	—	6	4	2	—	1	—	61	24
\$25,000 and under \$30,000.....	—	—	3	1	—	—	—	—	37	14
\$30,000 and under \$35,000.....	2	—	5	2	1	—	—	—	20	6
\$35,000 and under \$40,000.....	2	—	1	1	1	—	1	—	17	3
\$40,000 and under \$45,000.....	—	—	1	—	—	—	—	—	9	2
\$45,000 and under \$50,000.....	—	—	3	1	—	—	—	—	13	1
\$50,000 and over.....	—	—	86	91	—	—	—	—	23	8
Total.....	115	127	4,046	825	362	150	350	313	12,986	6,956

Per cent of families provided for

Cost group	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	0.4	1.0	—	—	—	0.2	3.7	3.8	17.7	18.4	0.1	—
\$2,000 and under \$3,000.....	.8	.3	—	18.8	0.4	1.1	13.2	8.4	31.8	30.2	.1	1.7
\$3,000 and under \$4,000.....	2.0	1.1	14.3	6.3	4.0	3.1	11.2	15.5	22.9	27.7	4.6	4.8
\$4,000 and under \$5,000.....	4.1	1.8	14.3	12.5	13.3	11.6	22.1	41.4	9.1	11.3	35.1	23.4
\$5,000 and under \$6,000.....	27.0	11.0	4.8	18.8	18.8	23.7	20.0	17.1	4.6	4.3	30.1	28.8
\$6,000 and under \$7,000.....	22.0	47.9	4.8	—	23.3	23.8	13.2	5.4	3.5	2.0	14.9	25.1
\$7,000 and under \$8,000.....	23.4	26.1	—	—	12.4	14.1	5.5	3.6	2.1	1.5	6.0	7.7
\$8,000 and under \$9,000.....	8.5	6.6	—	—	7.3	7.6	2.9	1.4	1.3	.6	3.8	4.6
\$9,000 and under \$10,000.....	2.9	3.2	—	6.3	4.5	3.3	1.5	.4	.9	.8	1.9	2.8
\$10,000 and under \$11,000.....	2.5	.6	14.3	6.3	4.8	2.6	2.0	1.0	1.3	.7	.8	.3
\$11,000 and under \$12,000.....	—	—	—	—	.7	.9	.2	—	.5	.3	.1	.3
\$12,000 and under \$13,000.....	3.1	.1	19.0	—	2.6	2.2	.8	.6	.7	.4	.7	—
\$13,000 and under \$14,000.....	.1	—	—	—	.6	.6	.5	—	.3	.1	—	—
\$14,000 and under \$15,000.....	—	.1	4.8	—	1.0	1.4	.5	.2	.3	.1	.3	.3
\$15,000 and under \$16,000.....	1.4	—	4.8	12.5	1.0	.2	1.0	.2	.7	.3	.3	—
\$16,000 and under \$17,000.....	.1	—	—	—	.6	.6	—	.2	.2	.1	—	—
\$17,000 and under \$18,000.....	—	—	4.8	6.3	.3	.5	.2	—	.2	.2	—	—
\$18,000 and under \$19,000.....	.1	.1	—	—	.5	.6	—	.2	.3	.1	—	—
\$19,000 and under \$20,000.....	—	—	4.8	—	.2	.3	.2	—	.1	.1	—	—
\$20,000 and under \$25,000.....	.4	—	—	6.3	1.4	.5	.8	.2	.5	.5	.4	—
\$25,000 and under \$30,000.....	.4	—	4.8	6.3	.6	.6	.2	.2	.4	.2	.3	—
\$30,000 and under \$35,000.....	—	.1	—	—	.3	.2	—	.2	.2	(10)	.1	—
\$35,000 and under \$40,000.....	.3	—	—	—	.2	—	—	—	.1	.1	.1	—
\$40,000 and under \$45,000.....	—	—	—	—	.3	.2	.2	—	.1	(10)	—	—
\$45,000 and under \$50,000.....	.1	—	4.8	—	.3	—	.2	—	.1	—	.1	—
\$50,000 and over.....	.3	—	—	—	.5	.3	.2	—	.2	.1	—	.3
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ 1 at \$50,000, 1 at \$57,500, 1 at \$85,000, 1 at \$70,000, 1 at \$75,000, 1 at \$150,000.

² 1 at \$117,000.

¹⁰ Less than one-tenth of 1 per cent.

TABLE 1.—ESTIMATED COST OF 1-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS—Continued

Per cent of families provided for—Continued

Cost group	New Haven		Philadelphia		Richmond		St. Paul		Total, 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	1.7	0.8	1.3	0.4	8.0	8.0	-----	1.3	7.7	9.4
\$2,000 and under \$3,000.....	3.5	.8	1.5	4.8	10.8	18.0	4.6	5.8	14.0	16.4
\$3,000 and under \$4,000.....	16.5	4.7	37.4	32.1	16.0	16.7	26.3	23.3	23.1	20.2
\$4,000 and under \$5,000.....	16.5	31.5	41.5	36.1	22.1	26.7	28.3	27.5	22.3	17.5
\$5,000 and under \$6,000.....	26.1	27.6	10.9	18.1	16.3	12.0	16.0	23.0	11.9	12.1
\$6,000 and under \$7,000.....	8.7	8.7	2.7	1.5	9.7	6.7	8.0	9.3	7.2	10.7
\$7,000 and under \$8,000.....	6.1	8.7	1.6	2.7	7.7	2.7	5.7	3.8	4.6	6.1
\$8,000 and under \$9,000.....	5.2	7.9	.7	.1	1.9	4.7	2.3	1.9	2.2	2.3
\$9,000 and under \$10,000.....	6.1	4.7	.2	.1	1.1	-----	2.3	.3	1.2	1.3
\$10,000 and under \$11,000.....	1.7	.8	.4	1.2	2.5	2.7	2.6	2.2	1.4	1.0
\$11,000 and under \$12,000.....	1.7	.8	.1	.1	-----	-----	.6	-----	.3	.3
\$12,000 and under \$13,000.....	-----	2.4	.1	.5	.8	1.3	1.4	-----	.8	.6
\$13,000 and under \$14,000.....	-----	.8	.1	-----	.6	-----	-----	-----	.2	.1
\$14,000 and under \$15,000.....	-----	-----	.1	.5	.3	-----	-----	-----	.3	.3
\$15,000 and under \$16,000.....	1.7	-----	.2	.4	.3	.7	.6	1.0	.6	.3
\$16,000 and under \$17,000.....	-----	-----	.1	-----	.8	-----	.3	-----	.2	.1
\$17,000 and under \$18,000.....	-----	-----	.1	.2	-----	-----	-----	-----	.1	.2
\$18,000 and under \$19,000.....	.9	-----	.2	-----	-----	-----	.6	.3	.3	.2
\$19,000 and under \$20,000.....	-----	-----	.1	-----	-----	-----	.3	-----	.1	.1
\$20,000 and under \$25,000.....	-----	-----	.1	.5	.6	-----	.3	-----	.5	.3
\$25,000 and under \$30,000.....	-----	-----	.1	.1	-----	-----	-----	-----	.3	.2
\$30,000 and under \$35,000.....	1.7	-----	.1	.2	.3	-----	-----	-----	.2	.1
\$35,000 and under \$40,000.....	1.7	-----	(10)	.1	.3	-----	.3	-----	.1	(10)
\$40,000 and under \$45,000.....	-----	-----	(10)	-----	-----	-----	-----	-----	.1	(10)
\$45,000 and under \$50,000.....	-----	-----	.1	.1	-----	-----	-----	-----	.1	(10)
\$50,000 and over.....	-----	-----	.1	.1	-----	-----	-----	-----	.2	.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹⁰ Less than one-tenth of 1 per cent.

In these 10 cities 12,986 one-family dwellings were erected in accordance with permits issued in 1929. However, only 6,956 one-family dwellings were erected under permits issued in 1931.

Considering the 10 cities as a whole, there was not a large increase in the percentage of dwelling houses costing less than \$3,000. In 1929, 21.7 per cent of all dwellings for which permits were issued cost less than \$3,000, while in 1931 the percentage had risen to 25.8.

If, however, all dwellings costing less than \$5,000 are considered, it is found that 67.1 per cent of all 1-family dwellings fell in this group in 1929, while only 63.5 per cent were in the group in 1931. There was considerable difference in the individual cities in the percentage of dwellings erected in this cost group. For example, in Los Angeles in 1929, 81.5 per cent of all 1-family dwellings for which permits were issued fell in this group; in 1931, the percentage was 87.6. In contrast, in Brooklyn, in 1931, only 4.2 per cent of all 1-family dwellings cost less than \$5,000; this was the only city in which less than 10 per cent of the total dwellings erected cost less than that amount. In Cincinnati 1-family dwellings costing less than \$5,000 constituted 16.0 per cent of all dwellings erected under 1931 permits; in Cambridge, Milwaukee, and New Haven between 25 and 50 per cent, and in Denver, Richmond, Philadelphia, and St. Paul between 50 and 75 per cent. Los Angeles was the only city where more than 75 per cent of the 1-family dwellings erected under 1931 permits cost less than \$5,000.

---In Cambridge, Denver, Los Angeles, and Richmond 1-family dwellings costing less than \$5,000 formed a larger percentage of the total in 1931 than in 1929, while in Brooklyn, Cincinnati, Milwaukee, New Haven, Philadelphia, and St. Paul they formed a smaller percentage.

In 1931 the largest number of houses erected in any cost group in Brooklyn fell in the \$6,000 class. In Cambridge the \$2,000 and \$5,000 classes were the most popular, each 18.8 per cent. In Cincinnati the largest number fell in the \$6,000 class; in Milwaukee, in the \$5,000 class; in New Haven, Philadelphia, Richmond, and St. Paul, in the \$4,000 class; and in Los Angeles, in the \$2,000 class.

Table 2 shows the number and per cent of families provided for in 1-family dwellings in the four cities for which figures were collected for 1931 but not for 1929, together with the number and per cent of families provided for in the 14 cities for which data were collected for the year 1931, by cost groups.

TABLE 2.—ESTIMATED COST OF 1-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN FOUR SPECIFIED CITIES IN 1931, BY COST GROUPS

Number of families provided for

Cost	Colum- bus, Ga.	Greens- boro, N. C.	Indian- apolis, Ind.	Provi- dence, R. I.	Total, 4 cities	Total, 14 cities
Under \$2,000.....	8	4	17	—	29	683
\$2,000 and under \$3,000.....	5	5	24	—	34	1,176
\$3,000 and under \$4,000.....	2	2	66	4	74	1,481
\$4,000 and under \$5,000.....	—	2	42	19	63	1,277
\$5,000 and under \$6,000.....	6	—	44	42	92	931
\$6,000 and under \$7,000.....	2	5	33	40	80	826
\$7,000 and under \$8,000.....	—	5	15	13	33	459
\$8,000 and under \$9,000.....	—	2	13	5	20	183
\$9,000 and under \$10,000.....	—	1	12	1	14	105
\$10,000 and under \$11,000.....	—	—	3	2	5	77
\$11,000 and under \$12,000.....	1	—	5	—	6	24
\$12,000 and under \$13,000.....	—	1	4	1	6	46
\$13,000 and under \$14,000.....	—	—	2	—	2	9
\$14,000 and under \$15,000.....	—	—	4	—	4	22
\$15,000 and under \$16,000.....	—	—	4	1	5	27
\$16,000 and under \$17,000.....	—	—	—	—	—	10
\$17,000 and under \$18,000.....	—	—	—	—	—	13
\$18,000 and under \$19,000.....	—	—	—	—	—	11
\$19,000 and under \$20,000.....	—	—	4	—	4	9
\$20,000 and under \$25,000.....	—	—	5	4	9	33
\$25,000 and under \$30,000.....	—	—	—	2	2	16
\$30,000 and under \$35,000.....	—	—	—	1	1	7
\$35,000 and under \$40,000.....	—	—	—	1	1	4
\$40,000 and under \$45,000.....	—	—	—	—	—	2
\$45,000 and under \$50,000.....	—	—	2	—	2	3
\$50,000 and over.....	—	—	—	1	1	9
Total.....	24	27	299	157	487	7,443

Per cent of families provided for

Under \$2,000.....	33.3	14.8	5.7	—	6.0	9.2
\$2,000 and under \$3,000.....	20.8	18.5	8.0	—	7.0	15.8
\$3,000 and under \$4,000.....	8.3	7.4	22.1	2.9	15.2	19.9
\$4,000 and under \$5,000.....	—	7.4	14.0	13.9	12.9	17.2
\$5,000 and under \$6,000.....	25.0	—	14.7	30.7	18.9	12.5
\$6,000 and under \$7,000.....	8.3	18.5	11.0	29.2	16.4	11.1
\$7,000 and under \$8,000.....	—	18.5	5.0	9.5	6.8	6.2
\$8,000 and under \$9,000.....	—	7.4	4.3	3.6	4.1	2.5
\$9,000 and under \$10,000.....	—	3.7	4.0	.7	2.9	1.4
\$10,000 and under \$11,000.....	—	—	1.0	1.5	1.0	1.0
\$11,000 and under \$12,000.....	4.2	—	1.7	—	1.2	.3
\$12,000 and under \$13,000.....	—	3.7	1.3	.7	1.2	.6
\$13,000 and under \$14,000.....	—	—	.7	—	.4	.1
\$14,000 and under \$15,000.....	—	—	1.3	—	.8	.3
\$15,000 and under \$16,000.....	—	—	1.3	.7	1.0	.4
\$16,000 and under \$17,000.....	—	—	—	—	—	.1
\$17,000 and under \$18,000.....	—	—	—	—	—	.2
\$18,000 and under \$19,000.....	—	—	—	—	—	.1
\$19,000 and under \$20,000.....	—	—	1.3	—	.8	.1
\$20,000 and under \$25,000.....	—	—	1.7	2.9	1.8	.4
\$25,000 and under \$30,000.....	—	—	—	1.5	.4	.2
\$30,000 and under \$35,000.....	—	—	—	.7	.2	.1
\$35,000 and under \$40,000.....	—	—	—	.7	.2	.1
\$40,000 and under \$45,000.....	—	—	—	—	—	(1)
\$45,000 and under \$50,000.....	—	—	.7	—	.4	(1)
\$50,000 and over.....	—	—	—	.7	.2	.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

¹ Less than one-tenth of 1 per cent.

Information concerning dwellings, by cost groups, was collected from the cities of Columbus, Ga., Greensboro, N. C., Indianapolis, Ind., and Providence, R. I., for the first time in the year 1931.

In the four cities 41.1 per cent of all dwelling houses erected in accordance with permits issued for the year 1931 cost less than \$5,000. The range in percentage of dwellings costing less than \$5,000 was from 16.8 per cent in Providence to 62.4 per cent in Columbus. In Columbus 33.3 per cent of all dwellings erected cost less than \$2,000. In Providence no dwellings were erected costing less than \$3,000.

Two-Family Dwellings

TABLE 3 shows the number and per cent of families provided for in 2-family dwellings in 10 representative cities for the years 1929 and 1931, by cost groups.

TABLE 3.—ESTIMATED COST PER FAMILY OF 2-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE)¹ FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS

Number of families provided for

Cost per family unit	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	2	10					1		558	277	6	
\$2,000 and under \$3,000.....	20	40	2		42	22	2	8	666	312	56	22
\$3,000 and under \$4,000.....	92	196	16	4	90	36	28	12	638	445	410	122
\$4,000 and under \$5,000.....	201	562	18	20	112	48	14	4	202	121	298	118
\$5,000 and under \$6,000.....	358	166	24	10	26	14	5		114	26	48	17
\$6,000 and under \$7,000.....	105	66	2	4	22	8	2		66	4	17	5
\$7,000 and under \$8,000.....	69	17			20	2			51	4	7	
\$8,000 and under \$9,000.....	17	4			2				9		10	2
\$9,000 and under \$10,000.....	10	6			2				5	3	5	
\$10,000 and under \$11,000.....	20	6							2	1	5	2
\$11,000 and under \$12,000.....											2	3
\$12,000 and under \$13,000.....	19	3							1			
\$13,000 and under \$14,000.....	1										2	1
\$14,000 and under \$15,000.....									1			
\$15,000 and over.....	26	32							32		41	
Total.....	920	1,078	62	38	316	130	52	24	2,405	1,193	867	292

Cost per family unit	New Haven		Philadelphia		Richmond		St. Paul		Total 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....			12			2	2	2	581	291
\$2,000 and under \$3,000.....	2		34		4	16	6	10	834	430
\$3,000 and under \$4,000.....	4	4	42	22	10	8	18	1	1,348	850
\$4,000 and under \$5,000.....	2		24	16	12	10	2	8	975	907
\$5,000 and under \$6,000.....	6		14		16		4		615	233
\$6,000 and under \$7,000.....			5					2	219	89
\$7,000 and under \$8,000.....			3		8				158	23
\$8,000 and under \$9,000.....			1						39	6
\$9,000 and under \$10,000.....			1					1	23	10
\$10,000 and under \$11,000.....	1								28	9
\$11,000 and under \$12,000.....									2	3
\$12,000 and under \$13,000.....									20	3
\$13,000 and under \$14,000.....									3	1
\$14,000 and under \$15,000.....									1	
\$15,000 and over.....									9	2
Total.....	15	4	136	38	50	36	32	24	4,855	2,857

¹ Includes 1-family and 2-family dwellings with stores combined.

² 4 at \$15,000, 2 at \$20,000.

³ 2 at \$20,000.

⁴ 1 at \$15,000.

TABLE 3.—ESTIMATED COST PER FAMILY OF 2-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS—Continued

Per cent of families provided for

Cost per family unit	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....	0.2	0.9					1.9		23.2	23.2	0.7	-----
\$2,000 and under \$3,000.....	2.2	3.7	3.2		13.3	16.9	3.8	33.3	27.7	26.2	6.5	7.5
\$3,000 and under \$4,000.....	10.0	18.2	25.8	10.5	28.5	27.7	53.8	50.0	26.5	37.3	47.3	41.8
\$4,000 and under \$5,000.....	21.8	52.1	29.0	52.6	35.4	36.9	26.9	16.7	12.1	10.1	34.4	40.4
\$5,000 and under \$6,000.....	38.9	15.4	38.7	26.3	8.2	10.8	9.6		4.7	2.2	5.5	5.8
\$6,000 and under \$7,000.....	11.4	6.1	3.2	10.5	7.0	6.2	3.8		2.7	.3	2.0	1.7
\$7,000 and under \$8,000.....	7.5	1.6			6.3	1.5			2.1	.3	.8	-----
\$8,000 and under \$9,000.....	1.8	.4			.6				.4		1.2	.7
\$9,000 and under \$10,000.....	1.1	.6			.6				.2	.3	.6	-----
\$10,000 and under \$11,000.....	2.2	.6							.1	.1	.6	.7
\$11,000 and under \$12,000.....											.2	1.0
\$12,000 and under \$13,000.....	2.1	.3							(^a)			
\$13,000 and under \$14,000.....	.1										.2	.3
\$14,000 and under \$15,000.....									(^a)			
\$15,000 and over.....	.7	.2							.1		.1	-----
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Cost per family unit	New Haven		Philadelphia		Richmond		St. Paul		Total 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....			8.8			5.6	6.3	8.3	12.0	10.2
\$2,000 and under \$3,000.....	13.3		25.0		8.0	44.4	18.8	41.7	17.2	15.1
\$3,000 and under \$4,000.....	26.7	100.0	30.9	57.9	20.0	22.2	56.3	4.2	27.8	29.8
\$4,000 and under \$5,000.....	13.3		17.6	42.1	24.0	27.8	6.3	33.3	20.1	31.7
\$5,000 and under \$6,000.....	40.0		10.3		32.0		12.5		12.7	8.2
\$6,000 and under \$7,000.....			3.7					8.3	4.5	3.1
\$7,000 and under \$8,000.....			2.2		16.0				3.3	.8
\$8,000 and under \$9,000.....			.7						.8	.2
\$9,000 and under \$10,000.....			.7					4.2	.5	.4
\$10,000 and under \$11,000.....	6.7								.6	.3
\$11,000 and under \$12,000.....									(^a)	.1
\$12,000 and under \$13,000.....									.4	.1
\$13,000 and under \$14,000.....									.1	(^a)
\$14,000 and under \$15,000.....									(^a)	-----
\$15,000 and over.....									.2	.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^a Less than one-tenth of 1 per cent.

A 2-family dwelling is one in which one family lives over the other, or two families live on the same floor and have a common entrance. The costs as shown in Table 3 are per family costs, and not costs per building.

Of the 4,855 two-family dwellings erected in accordance with 1929 permits, 77.3 per cent cost less than \$5,000 per family. Of the 2,857 two-family dwellings erected in accordance with 1931 permits, 86.8 per cent cost less than \$5,000 per family.

As in 1-family dwellings, there was a great difference in the cost of 2-family dwellings in the different cities. In Brooklyn, Cambridge, and Cincinnati, according to 1931 permits more 2-family dwellings were erected at a cost of \$4,000 per family than at any other cost group. In Denver, Los Angeles, Milwaukee, New Haven, and Philadelphia \$3,000 was the most popular price per family in this class of dwelling. In Richmond and St. Paul a larger percentage were erected at a cost of \$2,000 per family than at any other cost group.

Table 4 shows the number and per cent of 2-family dwellings in two cities for which information was collected for the year 1931 only, together with the number and per cent of families provided for in the 14 cities for which data were collected for 1931, by cost groups. Columbus, Ga., and Greensboro, N. C., reported no 2-family dwellings for 1931.

TABLE 4.—ESTIMATED COST PER FAMILY OF 2-FAMILY DWELLINGS (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN TWO SPECIFIED CITIES, 1931, BY COST GROUPS

Cost per family unit	Number of families provided for				Per cent of families provided for			
	Indian- apolis, Ind.	Provi- dence, R. I.	Total, 2 cities	Total, 14 cities	Indian- apolis, Ind.	Provi- dence, R. I.	Total, 2 cities	Total, 14 cities
Under \$2,000.....	26		26	317	34.7		14.6	10.4
\$2,000 and under \$3,000.....	32	4	36	466	42.7	3.9	20.2	15.4
\$3,000 and under \$4,000.....	6	16	22	872	8.0	15.5	12.4	28.7
\$4,000 and under \$5,000.....	8	33	41	948	10.7	32.0	23.0	31.2
\$5,000 and under \$6,000.....	2	27	29	262	2.7	26.2	16.3	8.6
\$6,000 and under \$7,000.....		13	13	102		12.6	7.3	3.4
\$7,000 and under \$8,000.....		5	5	28		4.9	2.8	.9
\$8,000 and under \$9,000.....		3	3	9		2.9	1.7	.3
\$9,000 and under \$10,000.....				10				.3
\$10,000 and under \$11,000.....				9				.3
\$11,000 and under \$12,000.....				3				.1
\$12,000 and under \$13,000.....				3				.1
\$13,000 and under \$14,000.....		2	2	3		1.9	1.1	.1
\$14,000 and under \$15,000.....								
\$15,000 and over.....	1		1	3	1.3		.6	.1
Total.....	75	103	178	3,035	100.0	100.0	100.0	100.0

¹ 1 at \$15,000.

In these two cities 70.2 per cent of the families provided for in 2-family dwellings were housed in buildings costing less than \$5,000, as compared with 85.7 per cent in the 14 cities as a group.

Apartment Houses

TABLE 5 shows the number and per cent of family housing units provided for in apartment houses in 10 representative cities in 1929 and 1931, by cost groups.

TABLE 5.—ESTIMATED COST PER FAMILY HOUSING UNIT OF APARTMENT HOUSES (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS

Number of families provided for

Cost per family unit	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....		92	33		111	16	197	132	3,056	834	221	44
\$2,000 and under \$3,000.....	618	703	25		170	94	354	236	2,502	826	356	28
\$3,000 and under \$4,000.....	1,760	3,953	150	33	182	174	182	28	1,023	173	527	58
\$4,000 and under \$5,000.....	1,446	823	85	13	117	5	22	13	222	4	89	8
\$5,000 and under \$6,000.....	710	383			57	16			127		56	35
\$6,000 and under \$7,000.....	48	215			13	4			31		32	7
\$7,000 and under \$8,000.....	105	222							13	59	3	
\$8,000 and under \$9,000.....	45	91				18					8	
\$9,000 and under \$10,000.....	156											12
\$10,000 and under \$11,000.....			114		49							
\$11,000 and under \$12,000.....												
\$12,000 and under \$13,000.....	78											
\$13,000 and over.....					13							
Total.....	4,966	6,482	407	46	702	327	755	434	7,020	1,837	1,292	192

¹ Cost \$15,000 and under \$16,000.

TABLE 5.—ESTIMATED COST PER FAMILY HOUSING UNIT OF APARTMENT HOUSES (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN SPECIFIED CITIES, 1929 AND 1931, BY COST GROUPS—Continued

Number of families provided for—Continued

Cost per family unit	New Haven		Philadelphia		Richmond		St. Paul		Total, 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....			56		52		71	20	3,797	1,138
\$2,000 and under \$3,000.....	109	27	688	48	54		10		4,886	1,962
\$3,000 and under \$4,000.....	27	6	618	4	24		26	3	4,519	4,432
\$4,000 and under \$5,000.....			187		24				2,192	866
\$5,000 and under \$6,000.....			26						976	434
\$6,000 and under \$7,000.....			143						267	238
\$7,000 and under \$8,000.....			76						243	235
\$8,000 and under \$9,000.....			160						213	109
\$9,000 and under \$10,000.....									156	12
\$10,000 and under \$11,000.....									163	
\$11,000 and under \$12,000.....										
\$12,000 and under \$13,000.....									78	
\$13,000 and over.....									3	
Total.....	136	33	1,954	52	154		107	23	17,493	9,426

Per cent of families provided for

Cost per family unit	Brooklyn		Cambridge		Cincinnati		Denver		Los Angeles		Milwaukee	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....		1.4	8.1		15.8	4.9	26.1	30.4	43.5	45.4	17.1	22.9
\$2,000 and under \$3,000.....	12.4	10.8	6.1		24.2	28.7	46.9	54.4	35.6	45.0	27.6	14.6
\$3,000 and under \$4,000.....	35.4	61.0	36.9	71.7	25.9	53.2	24.1	6.5	14.6	9.4	40.8	30.2
\$4,000 and under \$5,000.....	29.1	12.7	20.9	28.3	16.7	1.5	2.9	3.0	3.2	.2	6.9	4.2
\$5,000 and under \$6,000.....	14.2	5.9			8.1	4.9			1.8		4.3	18.2
\$6,000 and under \$7,000.....	1.0	3.3			1.9	1.2		2.8	.4		2.5	3.6
\$7,000 and under \$8,000.....	2.1	3.4						3.0	.8		.2	
\$8,000 and under \$9,000.....	.9	1.4				5.5					.6	
\$9,000 and under \$10,000.....	3.1											6.3
\$10,000 and under \$11,000.....			28.0		7.0							
\$11,000 and under \$12,000.....												
\$12,000 and under \$13,000.....	1.6											
\$13,000 and over.....					.4							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Cost per family unit	New Haven		Philadelphia		Richmond		St. Paul		Total, 10 cities	
	1929	1931	1929	1931	1929	1931	1929	1931	1929	1931
Under \$2,000.....			2.9		33.8		66.4	87.0	21.7	12.1
\$2,000 and under \$3,000.....	80.1	81.8	35.2	92.3	35.1		9.3		27.9	20.8
\$3,000 and under \$4,000.....	19.9	18.2	31.6	7.7	15.6		24.3	13.0	25.8	47.0
\$4,000 and under \$5,000.....			9.6		15.6				12.5	9.2
\$5,000 and under \$6,000.....			1.3						5.6	4.6
\$6,000 and under \$7,000.....			7.3						1.5	2.5
\$7,000 and under \$8,000.....			3.9						1.4	2.5
\$8,000 and under \$9,000.....			8.2						1.2	1.2
\$9,000 and under \$10,000.....									.9	.1
\$10,000 and under \$11,000.....									.9	
\$11,000 and under \$12,000.....										
\$12,000 and under \$13,000.....									.4	
\$13,000 and over.....									(²)	
Total.....	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0

² Less than one-tenth of 1 per cent.

In 1929, 21.7 per cent of the family dwelling units provided in apartment houses cost less than \$2,000, while in 1931 only 12.1 per cent cost less than that amount. In 1929, 49.6 per cent of all the family dwelling units provided in apartment houses cost less than \$3,000, while in 1931 the percentage was only 32.9 per cent.

Apartment houses erected under 1929 permits in these 10 cities provided for 17,493 families. In 1931 only 9,426 families were provided for.

Table 6 shows the number and per cent of family housing units provided for in apartment houses in Providence, R. I., for which data were collected for 1931 only, by cost groups. No apartment houses were reported for Columbus, Ga., Greensboro, N. C., and Indianapolis, Ind.

TABLE 6.—ESTIMATED COST PER FAMILY HOUSING UNIT IN APARTMENT HOUSES (IRRESPECTIVE OF SIZE AND TYPE) FOR WHICH PERMITS WERE ISSUED IN PROVIDENCE, R. I., 1931, BY COST GROUPS

Cost per family unit	Number of families provided for		Per cent of families provided for	
	Providence, R. I.	Total, 14 cities	Providence, R. I.	Total, 14 cities
Under \$2,000.....		1, 138		12.0
\$2,000 and under \$3,000.....	6	1, 968	28. 6	20. 8
\$3,000 and under \$4,000.....	15	4, 447	71. 4	47. 1
\$4,000 and under \$5,000.....		866		9. 2
\$5,000 and under \$6,000.....		434		4. 6
\$6,000 and under \$7,000.....		238		2. 5
\$7,000 and under \$8,000.....		235		2. 5
\$8,000 and under \$9,000.....		109		1. 2
\$9,000 and under \$10,000.....		12		. 1
\$10,000 and under \$11,000.....				
\$11,000 and under \$12,000.....				
\$12,000 and under \$13,000.....				
\$13,000 and over.....				
Total.....	21	9, 447	100. 0	100. 0

Providence was the only one of the four cities added to the list in 1931 in which apartment houses were erected. In Providence only 21 families were provided for.

WAGES AND HOURS OF LABOR

Wage-Rate Changes in American Industries

Manufacturing Industries

IN THE following table is presented information concerning wage-rate adjustments occurring between September 15 and October 15, as shown by reports received from manufacturing establishments supplying employment data to this bureau. Of the 18,211 manufacturing establishments included in the October survey, 18,009 establishments, or 98.9 per cent of the total, reported no change in wage rates over the month interval. The 2,616,245 employees in the establishments reporting no changes in wage rates constituted 97.4 per cent of the total number of employees covered by the October trend-of-employment survey of manufacturing industries.

Decreases in wage rates were reported by 194 establishments in 54 of the 89 industries surveyed. These establishments represented 1.1 per cent of the total number of establishments covered. The wage-rate decreases reported averaged 17.6 per cent and affected 68,859 employees, or 2.6 per cent of all employees in the establishments reporting.

Eight establishments in six industries reported wage-rate increases in October averaging 14.6 per cent and affecting 1,473 employees.

TABLE 1.—WAGE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING OCTOBER 15, 1932

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage changes	Wage increases	Wage decreases	No wage changes	Wage increases	Wage decreases
All manufacturing industries.....	18, 211	2, 686, 577	18, 009	8	194	2, 616, 245	1, 473	68, 859
Per cent of total.....	100. 0	100. 0	98. 9	(1)	1. 1	97. 4	(1)	2. 6
Slaughtering and meat packing...	234	87, 510	233	—	1	87, 270	—	240
Confectionery.....	325	43, 294	320	—	5	43, 159	—	135
Ice cream.....	391	11, 320	389	—	2	11, 267	—	53
Flour.....	437	16, 255	437	—	—	16, 255	—	—
Baking.....	972	63, 343	964	—	8	62, 616	—	727
Sugar refining, cane.....	15	8, 268	15	—	—	8, 268	—	—
Beet sugar.....	57	18, 012	57	—	—	18, 012	—	—
Beverages.....	332	10, 400	326	—	6	10, 295	—	105
Butter.....	316	5, 747	310	—	6	5, 694	—	53
Cotton goods.....	694	239, 434	683	1	10	237, 314	40	2, 080
Hosiery and knit goods.....	458	109, 616	456	1	1	108, 541	800	275
Silk goods.....	244	48, 488	244	—	—	48, 488	—	—
Woolen and worsted goods.....	252	58, 643	249	1	2	58, 262	299	82
Carpets and rugs.....	29	14, 048	29	—	—	14, 048	—	—
Dyeing and finishing textiles.....	149	34, 051	145	—	4	32, 953	—	1, 098
Clothing, men's.....	370	63, 185	366	3	1	63, 019	138	28
Shirts and collars.....	115	16, 288	114	—	1	16, 243	—	45
Clothing, women's.....	385	27, 166	383	—	2	27, 119	—	47
Millinery.....	131	10, 085	130	—	1	10, 063	—	22
Corsets and allied garments.....	30	5, 590	30	—	—	5, 590	—	—
Cotton small wares.....	112	9, 489	110	—	2	9, 099	—	390
Hats, fur-felt.....	38	6, 110	38	—	—	6, 110	—	—
Men's furnishings.....	76	6, 430	76	—	—	6, 430	—	—
Iron and steel.....	209	175, 105	208	—	1	174, 924	—	181
Cast-iron pipe.....	42	5, 749	42	—	—	5, 749	—	—
Structural and ornamental iron-work.....	190	14, 375	187	—	3	14, 028	—	347
Hardware.....	110	20, 845	108	—	2	20, 819	—	26
Steam fittings and steam and hot-water heating apparatus.....	97	14, 103	95	1	1	14, 028	16	59

¹ Less than one-tenth of one per cent.

TABLE 1.—WAGE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING OCTOBER 15, 1932—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage changes	Wage increases	Wage decreases	No wage changes	Wage increases	Wage decreases
Stoves.....	162	17, 571	161		1	17, 562		9
Bolts, nuts, washers, and rivets.....	69	8, 406	69			8, 406		
Cutlery (not including silver and plated cutlery) and edge tools.....	128	9, 023	128			9, 023		
Forgings, iron and steel.....	61	5, 416	60		1	5, 234		182
Plumbers' supplies.....	70	5, 935	69		1	5, 927		8
Tin cans and other tinware.....	59	9, 088	58		1	9, 079		9
Tools (not including edge tools, machine tools, files, or saws).....	132	6, 796	132			6, 796		
Wirework.....	70	5, 055	70			5, 055		
Lumber:								
Sawmills.....	643	61, 721	636		7	61, 185		536
Millwork.....	469	18, 230	466		3	18, 162		68
Furniture.....	483	46, 355	477	1	5	46, 006	180	169
Turpentine and rosin.....	21	1, 050	21			1, 050		
Leather.....	163	24, 289	162		1	24, 280		9
Boots and shoes.....	349	114, 035	349			114, 035		
Paper and pulp.....	406	78, 871	404		2	78, 385		486
Paper boxes.....	310	20, 833	307		3	20, 764		69
Printing:								
Book and job.....	759	49, 145	745		14	48, 271		874
Newspapers and periodicals.....	469	71, 295	457		12	69, 729		1, 566
Chemicals.....	114	20, 359	113		1	20, 287		72
Fertilizers.....	200	5, 962	199		1	5, 951		11
Petroleum refining.....	114	43, 049	114			43, 049		
Cottonseed, oil, cake, and meal.....	50	2, 907	50			2, 907		
Druggists preparations.....	41	7, 526	41			7, 526		
Explosives.....	24	3, 025	24			3, 025		
Paints and varnishes.....	364	15, 355	361		3	15, 319		36
Rayon.....	22	27, 073	22			27, 073		
Soap.....	88	12, 494	88			12, 494		
Cement.....	125	14, 715	125			14, 715		
Brick, tile, and terra cotta.....	680	18, 984	675		5	18, 724		260
Pottery.....	119	14, 335	118		1	14, 329		6
Glass.....	195	33, 975	188		7	31, 456		2, 519
Marble, granite, slate, and other stone products.....	228	6, 139	227		1	6, 122		17
Stamped and enameled ware.....	88	12, 584	86		2	12, 017		567
Brass, bronze, and copper products.....	209	27, 263	205		4	26, 517		746
Aluminum manufactures.....	26	4, 894	26			4, 894		
Clocks, time recording devices, and clock movements.....	22	3, 877	22			3, 877		
Gas and electric fixtures, lamps, lanterns, and reflectors.....	54	4, 858	54			4, 858		
Plated ware.....	54	7, 715	53		1	7, 637		78
Smelting and refining—copper, lead, and zinc.....	27	7, 363	26		1	7, 097		266
Jewelry.....	147	9, 398	145		2	9, 058		340
Chewing and smoking tobacco and snuff.....	33	10, 330	33			10, 330		
Cigars and cigarettes.....	212	46, 255	211		1	46, 175		80
Automobiles.....	245	151, 233	224		21	102, 427		48, 806
Aircraft.....	30	5, 698	28		2	5, 629		69
Cars, electric and steam railroad.....	39	5, 770	38		1	5, 654		116
Locomotives.....	15	2, 449	15			2, 449		
Shipbuilding.....	92	25, 610	92			25, 610		
Rubber tires and inner tubes.....	40	34, 387	39		1	31, 809		2, 578
Rubber boots and shoes.....	8	9, 562	8			9, 562		
Rubber goods, other than boots, shoes, tires, and inner tubes.....	102	19, 712	102			19, 712		
Agricultural implements.....	81	4, 978	78		3	4, 913		65
Electrical machinery, apparatus, and supplies.....	292	104, 177	290		2	102, 738		1, 439
Engines, turbines, tractors, and water wheels.....	88	15, 087	86		2	15, 046		41
Cash registers, adding machines, and calculating machines.....	44	12, 898	44			12, 898		
Foundry and machine-shop products.....	1, 075	97, 001	1, 065		10	96, 558		443
Machine tools.....	150	10, 259	148		2	10, 231		28
Textile machinery and parts.....	43	6, 459	43			6, 459		
Typewriters and supplies.....	18	8, 655	18			8, 655		
Radio.....	42	20, 650	42			20, 650		
Electric-railroad repair shops.....	395	20, 562	389		6	20, 360		202
Steam-railroad repair shops.....	543	74, 932	539		4	74, 836		96

Nonmanufacturing Industries

DATA concerning wage-rate changes occurring between September 15 and October 15 in 14 groups of nonmanufacturing industries are presented in the following table.

No changes in wage rates were reported in the anthracite mining and telephone and telegraph groups. In the remaining 12 groups a number of establishments reported decreases in wage rates over the month interval. The average per cent of decrease in rates in each of the several groups follows: Electric railroad operation and maintenance, 8.2 per cent; quarrying and nonmetallic mining, 8.9 per cent; power and light and laundries, 9.6 per cent each; hotels, 10.8 per cent; wholesale trade, 11.3 per cent; metalliferous mining, 12.5 per cent; canning and preserving, 12.9 per cent; retail trade, 13.9 per cent; dyeing and cleaning, 14.4 per cent; crude petroleum producing, 14.5 per cent; and bituminous coal mining, 19.7 per cent. Increases in wage rates from September to October were reported by 12 establishments in 3 of these industrial groups. The wage-rate increases reported averaged 5 per cent in wholesale trade, 10.8 per cent in hotels, and 15 per cent in the power and light group. The number of establishments reporting and number of employees covered in the October employment survey, together with a division of these establishments and employees into several groups according to the information reported, follows:

TABLE 2.—WAGE CHANGES IN NONMANUFACTURING INDUSTRIES DURING MONTH ENDING OCTOBER, 15, 1932

Industrial group	Estab- lish- ments report- ing	Total, number of em- ployees	Number of establish- ments reporting—			Number of employees having—		
			No wage changes	Wage in- creases	Wage de- creases	No wage changes	Wage in- creases	Wage de- creases
Anthracite mining.....	160	87,359	160	—	—	87,359	—	—
Per cent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Bituminous coal mining.....	1,143	167,450	1,123	—	20	162,862	—	4,588
Per cent of total.....	100.0	100.0	98.3	—	1.7	97.3	—	2.7
Metalliferous mining.....	287	21,230	278	—	9	20,748	—	482
Per cent of total.....	100.0	100.0	96.9	—	3.1	97.7	—	2.3
Quarrying and nonmetallic mining.....	620	23,098	613	—	7	22,839	—	259
Per cent of total.....	100.0	100.0	98.9	—	1.1	98.9	—	1.1
Crude petroleum producing.....	284	23,218	282	—	2	23,171	—	47
Per cent of total.....	100.0	100.0	99.3	—	0.7	99.8	—	0.2
Telephone and telegraph.....	8,282	270,117	8,282	—	—	270,117	—	—
Per cent of total.....	100.0	100.0	100.0	—	—	100.0	—	—
Power and light.....	3,528	214,057	3,518	4	6	210,540	812	2,705
Per cent of total.....	100.0	100.0	99.7	0.1	0.2	98.4	0.4	1.3
Electric-railroad and motor-bus op- eration and maintenance.....	501	134,422	491	—	10	132,550	—	1,872
Per cent of total.....	100.0	100.0	98.0	—	2.0	98.6	—	1.4
Wholesale trade.....	2,664	69,667	2,632	1	31	68,857	12	798
Per cent of total.....	100.0	100.0	98.8	(1)	1.2	98.8	(1)	1.1
Retail trade.....	14,135	345,131	14,091	—	44	344,042	—	1,089
Per cent of total.....	100.0	100.0	99.7	—	0.3	99.7	—	0.3
Hotels.....	2,557	135,846	2,537	7	13	134,626	204	1,016
Per cent of total.....	100.0	100.0	99.2	0.3	0.5	99.1	0.2	0.7

¹ Less than one-tenth of 1 per cent.

TABLE 2.—WAGE CHANGES IN **NONMANUFACTURING INDUSTRIES** DURING MONTH ENDING OCTOBER, 15, 1932—Continued

Industrial group	Estab- lish- ments report- ing	Total, number of em- ployees	Number of establish- ments reporting—			Number of employees having—		
			No wage changes	Wage in- creases	Wage de- creases	No wage changes	Wage in- creases	Wage de- creases
Canning and preserving.....	939	56,898	937	-----	2	56,862	-----	36
Per cent of total.....	100.0	100.0	99.8	-----	0.2	99.9	-----	0.1
Laundries.....	1,017	60,661	1,005	-----	12	59,974	-----	687
Per cent of total.....	100.0	100.0	98.8	-----	1.2	98.9	-----	1.1
Dyeing and cleaning.....	382	12,096	377	-----	5	11,995	-----	101
Per cent of total.....	100.0	100.0	98.7	-----	1.3	99.2	-----	0.8

Wage Changes Reported by Trade-Unions and Municipalities Since August, 1932

THE table following shows changes occurring in the wages and hours of trade-unions or municipalities in the past four months, which were reported to the bureau during the past month. The table covers 52,514 workers. The only workers reported to have gone on the 5-day week during that period were the city employees of Seattle, Wash.

In addition to wage changes reported the bureau received reports of renewed agreements covering 1,758 workers.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, AUGUST TO NOVEMBER, 1932

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Barbers and beauty culturists, St. Louis, Mo., and vicinity.....	Oct. 23	<i>Per week</i> 1 \$25.00	<i>Per week</i> 2 \$20.00	35½	35
Brewery and soft-drink workers, Red Wing, Minn.:.....					
Maltsters and kilnmen.....	Sept. 1	4 30.00	4 27.00	54	54
Chauffeurs and teamsters, Chicago, Ill.: Coal teamsters.....	Aug. 4	<i>Per day</i> 8.50	<i>Per day</i> 8.00	60	60
Clothing, Augusta, Me.: Shoe cutters.....	Sept. 1	<i>Per week</i> 26.10	<i>Per week</i> 23.75	(5)	(5)
Food, San Francisco, Calif.: Butchers and sausage makers.....	Sept. 8	38.00-40.40	38.00-39.50	45	45
Furniture, St. Louis, Mo.: Awning workers.....	Aug. 17	<i>Per hour</i> .90	<i>Per hour</i> .81	44	44
Longshoremen: Greater New York, N. Y.— Checkers and tallymen.....	Oct. 1	<i>Per day</i> 6.50	<i>Per day</i> 5.75	44	44
General cargo and cargo repairmen.....	do.....	<i>Per hour</i> .85	<i>Per hour</i> .75	44	44
Philadelphia, Pa.— Checkers.....	do.....	<i>Per day</i> 6.50	<i>Per day</i> 5.75	44	44
General cargo workers.....	do.....	<i>Per hour</i> .85	<i>Per hour</i> .75	44	44

¹ And 65 per cent of receipts over \$35.

² And 70 per cent of receipts over \$28.

³ Days per week.

⁴ Minimum.

⁵ Not reported.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, AUGUST
TO NOVEMBER, 1932—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Miners, Terre Haute, Ind., district:		<i>Per day</i>	<i>Per day</i>		
Coal miners (day work).....	Sept. 10	\$6. 10	\$4. 57½	48	48
Pick miners.....	do.	6. 91	6. 68	48	48
Motion-picture operators and theatrical workers:					
Motion-picture operators—		<i>Per hour</i>	<i>Per hour</i>		
Centralia, Ill.....	Sept. 1	.90-1. 10	.70-. 90	48	33-55½
		<i>Per week</i>	<i>Per week</i>		
Dubuque, Iowa.....	do.	63. 25	44. 25	56	56
Fitchburg, Mass.....	do.	62. 50	50. 00	36	36
Frederick, Md.....	do.	45. 00	35. 00	50	50
Freeport, Ill.....	Oct. 1	45. 15	25. 00-38. 00	42	31½-42
Hartford, Conn.....	Sept. 1	65. 00	50. 00	42	42
Hattiesburg, Miss.....	Nov. 7	39. 00	35. 00	28	28
Herrin, Ill.....	Sept. 1	45. 00-57. 00	42. 25-53. 25	(⁵)	(⁵)
		<i>Per hour</i>	<i>Per hour</i>		
Lakeland, Fla.....	do.	1. 30-1. 80	1. 00-1. 50	35	30
		<i>Per week</i>	<i>Per week</i>		
Lawrence, Kans.....	do.	42. 50	38. 00	7 7	7 7
Little Rock, Ark.....	do.	58. 50	50. 00	38½	38½
Macon, Ga.....	Aug. 8	50. 00	42. 50	33	33
		<i>Per hour</i>	<i>Per hour</i>		
Mason City, Iowa.....	Sept. 1	.75	.58	7 7	7 7
		<i>Per week</i>	<i>Per week</i>		
Mobile, Ala.....	do.	52. 50	50. 00	30	30
North Adams, Mass.....	do.	48. 00-54. 00	36. 00	36	36
Pine Bluff, Ark.....	do.	52. 00	39. 00	33	33
Pueblo, Colo.....	do.	46. 00-65. 00	35. 00-50. 00	42	42
St. Petersburg, Fla.....	do.	57. 50	50. 00	42	42
		<i>Per hour</i>	<i>Per hour</i>		
San Francisco, Calif.....	do.	2. 00-2. 35	1. 50-2. 00	36	36
		<i>Per week</i>	<i>Per week</i>		
Stamford, Conn.....	do.	\$ 65. 00	\$ 55. 00	50	50
Washington, D. C.....	do.	40. 00-85. 00	30. 00-77. 00	40	40
		<i>Per hour</i>	<i>Per hour</i>		
Watsonville, Calif.....	Sept. 3	1. 00-2. 25	.90-1. 50	(⁵)	35
		<i>Per week</i>	<i>Per week</i>		
Waukegan, Ill.....	Sept. 1	80. 00	70. 00	42	37½
Musicians—					
Battle Creek, Mich.....	Aug. 1	50. 00	30. 00	45½	45½
		<i>Per day</i>	<i>Per day</i>		
Bethlehem, Pa.....	Sept. 10	10. 00	6. 50	36	(⁵)
Cathlamet, Wash.....	Sept. 1	7. 00-8. 00	4. 00-5. 00	(⁵)	(⁵)
		<i>Per week</i>	<i>Per week</i>		
Elmira, N. Y.....	Oct. 10	55. 00	50. 00	25	25
Hartford, Conn.....	Sept. 17	73. 00	66. 00	51	51
New Bedford, Mass.....	Sept. 5	34. 00-45. 00	29. 00-38. 00	(⁵)	(⁵)
Portland, Me.....	Sept. 1	47. 50	42. 75	(⁵)	(⁵)
Reading, Pa.....	Sept. 4	45. 00	37. 75	19	24
		<i>Per day</i>	<i>Per day</i>		
San Bernardino, Calif.....	Oct. 22	10. 00	6. 00	38	20
Santa Ana, Calif.....	Sept. 1	10. 00	7. 00	(⁵)	(⁵)
Stage employees—		<i>Per week</i>	<i>Per week</i>		
Boston, Mass., and vicinity.....	Sept. 17	70. 00- 80. 00	59. 50- 72. 00	48	48
Des Moines, Iowa.....	Sept. 1	65. 00- 70. 00	55. 00- 64. 00	56	40
Hartford, Conn.....	do.	70. 00	50. 00	(⁵)	56
Lowell, Mass.....	do.	62. 86- 68. 10	52. 50- 57. 50	7 8	7 8
Miami, Fla.....	Nov. 1	41. 18- 62. 50	35. 00- 50. 00	7 6	7 6
North Adams, Mass.....	Sept. 1	35. 00- 40. 00	36. 00	(⁵)	(⁵)
Portland, Me.....	do.	45. 00	42. 50	7 8	7 8
San Jose, Calif.....	do.	60. 00	55. 00	48	48
Washington, D. C.....	do.	(⁵)	63. 75	48	48-56

⁵ Not reported.⁶ Per ton.⁷ Hours per day.⁸ Average.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, AUGUST
TO NOVEMBER, 1932—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Printing and publishing:					
Compositors and machine operators—					
Auburn, N. Y.—					
		<i>Per week</i>	<i>Per week</i>		
Job work, day	Aug. 1	\$38. 50	\$35. 75	44	44
Job work, night	do	41. 25	38. 50	44	44
Newspaper, day	do	42. 00	39. 00	48	48
Newspaper, night	do	45. 00	42. 00	45	45
Chicago, Ill.—					
		<i>Per hour</i>	<i>Per hour</i>		
Job work, day	Sept. 19	1. 29½	1. 22½	44	40
Job work, night	do	1. 50	1. 40	40	40
St. Joseph, Mo.—					
		<i>Per week</i>	<i>Per week</i>		
Newspaper, day	Aug. 8	46. 00	41. 00	48	48
Newspaper, night	do	49. 00	44. 00	48	48
Schenectady, N. Y.—					
Newspaper, day	Nov. 1	51. 00	52. 00	45	45
Newspaper, night	do	54. 50	55. 50	45	45
Stereotypers, Houston, Tex.—					
Day work	Aug. 21	45. 10	42. 00	48	48
Night work	do	46. 48	43. 50	48	48
Street-railway workers, San Antonio, Tex.:					
Motormen, conductors, bus operators, and shopmen	Aug. 1	<i>Per hour</i> . 56- . 61	<i>Per hour</i> . 56- . 61	54	40
Municipal employees:					
Monroe, Mich., teachers and janitors	Sept.—	(5)	(9)	(5)	(5)
Seattle, Wash.—					
		<i>Per month</i>	<i>Per month</i>		
Class A	Aug. 22	105-125	100. 00-113. 64	44	40
Class B	do	130-160	117. 00-139. 20	44	40
Class C	do	165-185	141. 90-157. 25	44	40
Class D	do	190-220	159. 60-184. 80	44	40
Class E	do	225-245	186. 75-203. 35	44	40
Class F	do	250-295	205. 00-241. 90	44	40
Class G	do	300-350	243. 00-283. 50	44	40
Class H	do	355-425	284. 00-340. 00	44	40
Sullivan, Ind.	Sept.—	(5)	(10)	(5)	(5)
White Plains, N. Y.—					
Police and firemen	Sept. 1	(5)	(11)	(5)	(5)
Other city employees	do	(5)	(12)	(5)	(5)

⁸ Not reported.⁹ 8 to 15 per cent reduction.¹⁰ 8 per cent reduction.¹¹ 5 per cent reduction.¹² 10 per cent reduction.

Basic Wage in the States of Australia

IN AUGUST, 1932, the Industrial Commission of New South Wales declared a reduction in the basic wage of that State, the first to be put into effect since the depression began. Most of the other States had already made some change, but in New South Wales the wage established in 1929—£4 3s. 6d. for adult males—had remained unaltered, in spite of several appeals on the part of the employers for a reduction. The Employers' Review (Sydney), in its issue for August, 1932, gives the following figures showing the basic wage in the several States, and the basic family for which they are calculated.

BASIC WAGE IN AUSTRALIAN STATES, AUGUST, 1932

[Pound at par=\$4.87, shilling=24.3 cents, and penny=2 cents, exchange rate of pound for August, 1932=\$3.48]

State, and basic family in case of adult males	Adult males			Adult females		
	£	s.	d.	£	s.	d.
New South Wales (man, wife, and 1 child)	3	10	0	1	18	0
Victoria (man, wife, and 3 children)	3	3	0			
Queensland (man, wife, and 3 children)	3	14	0	1	19	0
South Australia (man, wife, and 3 children)	3	3	0	1	15	0
Western Australia (man, wife, and 2 children)	3	12	0	1	18	11
Tasmania (man, wife, and 3 children)	3	5	0			

There are no declarations by any State tribunal in Victoria or Tasmania and the rates shown above are the Federal basic wages which are almost universally adopted in these two States.

In New South Wales the basic wage is augmented by family endowment, which is payable at the rate of 5s. per week for all children under 14 years, excluding the first child.

General Survey of Wages in Cuba, 1931 and 1932¹

General Wage Reductions

ALTHOUGH daily wages have been reduced in most Cuban industries from 15 to 25 per cent since July 1, 1931, the total amount of wages received by Cuban labor has declined approximately 40 per cent during this interval. This drastic decline in the emoluments of labor has been due to the disruption of the sugar and tobacco industries resulting from low prices of sugar and tobacco and a strike among tobacco workers as well as to the general curtailment of trade in other industries. Many of the smaller industries have had to curtail production due to lack of demand resulting from the lower purchasing power of the Cuban people and have been forced in doing so to release many skilled and unskilled laborers. Unemployment has been increasing during the past three years to such an extent that wage scales are no longer fixed in many industries, and laborers have been compelled to leave their own particular lines of industry in search of new fields of activity—in many instances without success.

While wages in the same industry differ in the various Provinces of Cuba, the following statistics of wages received in the several industries may be taken as a group picture in which Cuban industries as a whole are fairly well represented.

Agriculture

FARM labor is now so plentiful that ranchers and truck farmers can secure laborers at any price they wish to pay. In fact, it is not a question of what the farm hands demand, but what they can get. In many cases they do not receive pay in the form of money at all, but in the form of orders on the commissary departments (*bodegas*) belonging to the ranches in the small country towns. On one well-known hacienda laborers are paid 10 cents a day—5 cents in cash and 5 cents in credit at the store—and are glad to receive this small amount. Formerly labor had to be imported, particularly for work

¹ Report from Lee R. Blohm, American Consul at Habana, Oct. 15, 1932.

in the sugar and tobacco fields, but now the Cuban Government is attempting to repatriate many alien laborers. Farm wages, often including board and shelter, which amounted to from 40 cents to 60 cents a day two years ago, have now declined to 10 cents or even less a day. Fortunately, Cuban farm laborers in many cases have their own huts and garden plots where they raise pigs, poultry, vegetables, and fruit in season.

Working hours on these farms (*fincas*) last from dawn until night, that is, 12 hours in summer and 10 hours in winter. Farm labor on the pineapple plantations and truck farms producing for export receive a little higher wage than labor in the sugar industry, an industry which has suffered particularly during the present economic depression. Farm laborers on these fruit plantations are also usually given their living quarters. During the harvesting season laborers receive a little more pay than at any other time of the year, although the season lasts but from 45 to 50 days. Pineapple cutters, for instance, receive from \$2 to \$3 a day, compared with from \$3 to \$3.50 a day two years ago.

Sugar Industry

CULTIVATION of the cane fields involves a number of factors which directly affect the wages of the laborers employed. Wages vary, for instance, according to the distance of the cane fields from the mill and from the neighboring towns, according to the condition of the fields, and according to the character of the work required. Wages paid, however, in 1932 are reported to have been the lowest since the days of slavery in Cuba. Many planters (*colonos*) have been forced to neglect their fields this year because of the lack of funds to employ sufficient laborers to keep their fields clean of grass. The usual cane-field laborer considers himself fortunate to be employed at all and readily accepts 20 or 25 cents for a 10 to 12 hour workday. Other laborers have been receiving merely meals and living quarters in payment for their work.

Cane cutting is paid for on the basis of work done. The average rate in 1932 was from 15 to 20 cents per arroba (25 pounds), as compared with from 30 to 35 cents per arroba in 1931. Due to the heavy crop of cane in 1932, cane cutters were able to cut more cane than in the former year and thus bring up their average to from 22 to 30 cents per day of 8 to 10 hours.

Cane haulers were paid at the rate of 15 to 20 cents per 100 arrobas in 1932, as compared with from 20 to 25 cents in 1931. This rate, however, is for both man and boy, as one man alone can not handle the ox team used in the cane field. Most carts are able to handle about 300 arrobas each trip and earn, for man and boy together, \$1.50, of which the boy receives from 25 to 30 cents. In this case the oxen are supplied by the cartman (*carretero*). On some plantations the oxen and the boy are supplied by the sugar mill, in which case the cartman is paid about half the sum mentioned. Also, cane cutting and hauling may be paid on a contract basis, at from 30 to 45 cents per 100 arrobas.

These field workers are not insured against accident as are the employees of the sugar mills who live in the towns near the mills. Furthermore, these cane workers are employed only during the working season of from three to four months and receive no remuneration

from the sugar industry for the remaining months. Sugar mills also grind only during the season, using day and night shifts of from 10 to 12 hours each. Day work is paid for at the same rate as night work. Almost all mill employees are furnished free living quarters, and are insured in compliance with the workmen's compensation law of Cuba. Mill workers are also given free medical attention. However, in 1932 a few Cuban mills were forced to dispense with this service because of financial embarrassment. For the same reason many of the hospitals had to be abandoned.

Labor in the sugar mills in Cuba is usually employed at a fixed wage scale. Laborers who sew, pile, and load the bags, however, are frequently paid by the bag (325 pounds), each man receiving 3 or 4 cents a bag and earning 50 cents a day as a maximum in 1932, compared with 60 cents a day in 1931.

Table 1 shows the wages earned by skilled and unskilled laborers in the sugar mills of Cuba in 1932, in comparison with the same data for 1931. It will be noted that wages of skilled workers in sugar mills have declined more than those of unskilled laborers.

TABLE 1.—WAGES IN CUBAN SUGAR MILLS, 1931 AND 1932

Wage basis, and occupation	Wage rate		Wage basis, and occupation	Wage rate	
	1931	1932		1931	1932
Wage workers:			Salaried employees—Con.		
Unskilled laborers—			Masons.....	<i>Per day</i> \$3.75	<i>Per day</i> \$0.50-\$1.00
Timework.....	\$1.75	\$0.50-\$1.00	Painters.....	1.75	.50- 1.00
Piecework.....	.60	.50- .60	Plumbers.....	2.75	.50- 1.00
Salaried employees:				<i>Per month</i>	<i>Per month</i>
Carpenters.....	2.90	.50- 1.00	Clerks in storerooms.	35.00- 50.00	15.00- 30.00
Mechanics (rated as			Clerks in office.....	60.00-120.00	30.00- 70.00
toolmakers in			Labor foremen.....	80.00-120.00	40.00- 60.00
United States).....	4.83	.70- 1.00	Locomotive engineers	100.00	30.00- 75.00
Semiskilled employ-			Firemen.....	60.00	15.00- 30.00
ees.....	2.15	.50- .60	Brakemen.....	40.00	15.00- 20.00
Chauffeurs.....	2.46	.50- 1.00			

Seven or eight years ago locomotive engineers in sugar mills earned a salary of from \$200 to \$275 a month. Four years ago they were getting only \$125. To-day it will be noted that some are not getting more than \$30 per month. Wages of firemen and brakemen have been reduced in the same ratio.

Tobacco Industry

PLANTING and cultivating tobacco in Cuba is done on the share system, tenants receiving from one-third to one-half of the tobacco raised. Wages are consequently determined by the market price of tobacco. Work on processes for preparing the leaves for the market is covered by fixed rates, but prorated somewhat differently in the various districts.

Table 2 indicates the present rates of remuneration in the various branches of the tobacco industry as compared with 1931. Most of the workers in the manufacturing branch of the industry are piece-workers.

TABLE 2.—WAGES IN THE CUBAN TOBACCO INDUSTRY, 1931 AND 1932

Process and occupation	Daily earnings		Process and occupation	Daily earnings	
	1931	1932		1931	1932
Preparation:			Selection—Continued.		
Wetters.....	\$1.00-\$1.50	\$0.80-\$1.25	Selection.....		\$1.50
Stemmers.....	.80-1.00	.60-.80	Bunching leaves.....		\$0.80-1.20
Leaf spreaders.....	1.00-1.50	.80-1.20	Bunching "gavillas".....		1.20-1.60
Headers.....	1.00-1.40	1.00-1.20	Baling ¹		3.60-4.50
Leaf separators.....	1.00	.70	Tobacco manufacture:		
Foreman of leaf spreaders.....	1.20-1.50	1.00-1.25	Cigar makers.....	³ \$1.65-\$4.50	³ 1.50-4.00
Foreman of selectors.....	1.20-1.70	1.00-1.50	Tobacco strippers.....	1.70	1.10-1.50
Balers.....	2.25-2.75	2.00-2.50	Wrapper selectors.....	⁴ 7.00	⁴ 5.50
Selection:			Selectors and packers.....	4.20-6.00	⁴ 5.20
Raveling ¹35	Trimmers and dressers.....	5.50	4.00
Opening and spreading leaves.....		.70	Banders.....	2.50	1.75-2.25

¹ This work is done mostly by boys.² The baler pays for a helper out of his own wages.³ Varies according to quality of cigar.⁴ Maximum.

Labor in the Cuban tobacco-manufacturing industry is stated to be better remunerated to-day than that in any other industry, although wage scales in this industry are down to 17 to 20 per cent below scales in force prior to the tobacco workers' strike which began January 14, 1932, and ended in July, 1932. Cigar makers and selectors and packers work at piece rates varying according to the quality of the cigars made. Banders are paid at the rate of 50 cents per thousand cigars banded, and \$1.30 per thousand when the cigars are also wrapped in cellophane.

Cigar factories work 9 to 10 hours a day, although most laborers do not work more than 7 or 8 hours a day. Only men are employed in making cigars, although women are sometimes used in the cigarette factories.

Cigarettes are made chiefly by machinery, of course, and operators of these machines, including cigar-making machines, accounting machines, packing and stamping machines, are now reported to be receiving 15 per cent less for their work than in 1931. Operators' wages vary also according to the actual number of cigars produced on each machine operated. Operators, for instance, employed on the more modern type of machine of greater capacity receive as much as 50 per cent more than other operators. Some of these cigarette-making machines turn out 200,000 cigarettes a day, and the operator and his assistant receive, respectively, \$6.50 and \$3.50 as daily wages at this time. Three persons are required to operate a packing machine which can pack 25,000 cigarettes a day. These three workmen, consisting of an operator and two assistants, of whom the latter are women as a rule, receive \$10 a day, to be divided among the three workers, the two women receiving three-fifths of the total.

Two persons, usually women, are required to operate a stamping machine; they are now being paid \$5.70 together for a day's work. Thirty thousand packs of cigarettes can be stamped by this machine each day. When the stamping is done by hand, 32 cents is paid for each thousand packs stamped. A girl can earn \$1.10 per day, compared with \$2.25 per day in 1931. Hand packers are now earning \$3.50 per thousand packs, women and girls being employed almost entirely for this work. Each woman can earn \$2 daily, as compared with \$2.30 in 1931.

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Shoe Manufacturing

RATES for piecework in organized factories making misses' and women's shoes in Habana are given below. It is impossible to give fixed daily or weekly wages, since the factories are not paying any fixed wages for the principal operations. Pattern makers, however, were paid from \$25 to \$30 per week in 1931 and from \$15 to \$22 in 1932.

On piecework the capacity of the workers varies so greatly that no correct average earnings can be given with the data available. Table 3 shows the piece rates paid per dozen pairs of shoes, in the unionized factories in Habana.

TABLE 3.—PIECEWORK PRICES, PER DOZEN PAIRS, PAID OPERATORS IN ORGANIZED SHOE FACTORIES IN HABANA

Operation	1931	1932
Sole-leather room.....	\$0. 20-\$0. 25	\$0. 12-\$0. 15
Pulling over:		
By machine.....	. 12	. 06
By hand, including tacking, assembling (ready for lasting).....	. 60	. 40
Lasting, machine.....	. 20- . 25	. 15- . 20
Lasting, hand, including sole tacking.....	1. 50-2. 00	1. 00-1. 50
Pounding and trimming.....	. 06	. 04
Sole tacking.....	. 05	. 03
McKay sewing.....	. 08- . 10	. 05
Leveling.....	. 06	. 03
Wood-heel work—Alpha nailing, cementing flap, trimming flap, top lift nailing, and breasting and setting.....	. 70	. 50
Edge trimming and setting.....	. 25	. 18
Finishing—Naumkeag buffing, bottom staining, brushing, etc.....	. 30	. 25

In less important operations, such as channel opening, cementing, last pulling, etc., apprentices, boys and young men, are employed at salaries varying from \$3 to \$5 per week in 1932, compared with from \$5 to \$8 in 1931.

Table 4 shows the rates paid to operators on boys' and men's Goodyear-welt shoes selling at the factory price of from \$1.50 to \$3.25 per pair. It is estimated that the total cost of these shoes (including labor, power, rent, and other overhead costs) is from \$7 to \$8.50 per dozen pairs.

TABLE 4.—RATES PAID TO OPERATORS ON BOYS' AND MEN'S GOODYEAR-WELT SHOES IN HABANA, 1931 AND 1932

Operation	Rate per dozen pairs	
	1931	1932
Sole-leather room:		
Men.....	¹ \$25. 00-30. 00	¹ \$15. 00-20. 00
Boys.....	¹ 5. 00- 8. 00	¹ 3. 00- 5. 00
Insole tacking, trimming, assembling, and machine pulling over.....	. 80	. 60
Side lasting.....	. 10	. 06
Bed lasting (heels and toes).....	. 35	. 30
Heel-seat pounding.....	. 05	. 03
Upper trimming, by hand.....	. 12	. 08
Welt sewing.....	. 12	. 10
Welt beating and slashing.....	. 12	. 08
Sole laying, rounding, and channeling.....	. 25	. 15
Channel opening and lock-stitching.....	. 20- . 25	. 15
Heel-seat nailing.....	. 08	. 03
Leveling.....	. 06	. 04
Edge trimming and setting.....	. 40	. 25
Heel trimming and nailing.....	. 25	. 18
Heel breasting and slugging.....	. 10	. 08
Heel scouring, blacking, and setting.....	. 22	. 15
Naumkeag buffing, bottom staining, finishing, and last pulling.....	. 18	. 15

¹ Per week.

Stitching Room

Girl and woman apprentices are paid from \$2 to \$3 per week (1932), compared with from \$3 to \$5 in 1931. Capable stitching-room operators earn from \$5 to \$10 per week, according to quality of work and speed, compared with from \$7 to \$15 in 1931.

Average stitching work cost for misses' and women's shoes, McKays, of simple designs, is 40 cents per dozen pairs; for boys' and men's uppers, 50 cents per dozen pairs.

Working hours in organized factories are 8 per day during the week and a half day on Saturdays. Overtime is paid for at single rate only. Only a small per cent of Cuban shoe-factory workmen belong to either of the two unions in Cuba. Factories pay for accident insurance for workers in accordance with the workmen's compensation law of Cuba. No supplementary payments such as family allowances, holidays, free housing, pension contribution, or special-rate taxes are paid. Factories remain practically idle during the months of January and February, but from the 1st of March to about the middle of June they operate continually. It is during the latter months that summer-wear shoes are made. The working period for making winter-wear shoes extends from September 1 to the end of December.

Building Trades

Work in the building trades has been seriously affected by the low level of construction activities. Even when laborers are employed in these trades they usually work but a few weeks at a time and may be idle for long periods. Daily wages for these workmen have decreased 15 to 20 per cent during the past year and 25 to 30 per cent since 1930. Their actual income, however, has decreased at least 50 per cent because of the longer periods of idleness. Bricklayers and masons still receive from \$2 to \$2.50 a day; mechanics and blacksmiths, \$2 per day; plumbers, \$2 to \$3 a day; and carpenters, \$2 to \$2.50 a day.

All laborers in the building trades work from 8 to 8½ hours a day, 48 hours a week, and in most cases are paid time and a half for overtime work.

Public Utilities

MEN employed by the public utilities in Cuba have been reduced in wages during the past two years. Table 5 shows the wages paid by the local street-car company for different kinds of labor at the present time, as compared with the rates prevailing in June, 1930:

TABLE 5.—HOURLY WAGE RATES AND DAILY WORKING HOURS OF STREET-RAILWAY WORKERS IN HABANA, 1930 AND 1932

Occupation	Daily working hours	Wages per hour			
		June, 1930		1932	
		Maximum	Minimum	Maximum	Minimum
Carpenters.....	8	\$0.61	\$0.37	\$0.52	\$0.32
Mechanics.....	8	.61	.42	.55	.32
Electricians.....	8	.46	.42	.40	.32
Painters.....	8	.42	.37	.40	.32
Unskilled laborers.....	8	.23		.20	

Wage scales of the Cuban railway companies have also been lowered considerably. Table 6 gives a comparison of the wages paid at the present time (1932) by the maintenance department of one of the larger railroads as compared with the same period of 1930:

TABLE 6.—WAGES IN THE MAINTENANCE DEPARTMENT OF A CUBAN RAILROAD, 1930 AND 1932

Occupation	Wage rate	
	1930	1932
	<i>Per month</i>	<i>Per month</i>
Itinerant repair men.....	\$84.00	\$73.00
Resident repair men.....	73.00	62.00
Foremen.....	86.00	73.00
	<i>Per day</i>	<i>Per hour</i>
Boss carpenters.....	2.80	.30
Other carpenters.....	2.42	.25½
Tinsmiths.....	2.80	.30
Boss plumbers and fitters.....	3.26	.35
Other plumbers and fitters.....	2.42	.25½
Masons.....	2.80	.30
Laborers on construction jobs.....	1.30	.13½
Itinerant laborers.....	1.10	.12
Other laborers.....	1.00	.12½

The Habana Electric Light & Power Co. pays its skilled labor 40 to 45 cents an hour, its unskilled, 20 to 25 cents an hour, on an 8-hour, 6-day week basis. Many of this company's employees now doing unskilled labor are reported to be skilled electricians merely working for a living.

Textile Industry

Most of the textile factories in Cuba are very small and have not established fixed wage scales. A great deal of the work done, particularly in the garment trades, is let out by jobbers to contractors at fixed rates, depending upon the garment. The contractors usually make from 10 to 15 per cent. In these trades remuneration does not often exceed \$3 to \$4 a week when workers are on a wage basis and amounts to considerably less than that when workers are forced to accept as remuneration certain portions of textile material for their own use. Almost 90 per cent of the workers employed in one large textile factory manufacturing cotton goods are apprentices or unskilled weavers. Most of these weavers are women, who rarely earn more than \$1 per day, even after they have become fairly expert at their work. This particular factory, however, provides housing, water, light, and medical attention free of charge to its workmen. Single rate is paid for overtime work, and workers are changed from day to night shift frequently.

Expert mechanics handling textile machinery earn from \$150 to \$200 a month; packers and truckmen rarely receive more than \$1 a day.

The income of workers in the hat industry has been similarly reduced due to the decline in production. Men employed in this industry are usually paid a flat rate of \$12 to \$15 per week, during which time they are supposed to turn out 20 dozen hats per day. Most of the hat factories can supply the present demand by operating one week in each month. Women when employed in this industry receive about 60 per cent of the wages offered to the men.

Soap and Candle Industry

THE wages in the manufacture of soap and candles and perfumery vary greatly as there is considerable competition in this trade in Cuba to-day. Considerable piecework is still done, particularly by the women in the larger factories, who earn from \$1 to \$2 a day wrapping and packing these commodities. Male workers in these factories, who are shifted about quite a bit from one task to another during dull seasons, earn from \$1.20 to \$5 a day, depending upon their qualifications for being transferred from one department to another.

At present no overtime is required in these factories. Clerical work in the offices of these factories is now being obtained at from \$60 to \$75 a month. Skilled workers in one particular factory in Habana are receiving 25 cents an hour; unskilled laborers, 18 cents; and girls, 10 cents.

Confectioneries and Bakeries

WORKERS in the candy and biscuit factories of Cuba work on an 8-hour basis. Most of these are men, but the sorting, wrapping, and packing of these products are done almost entirely by women and young girls, who are paid according to what they do. The latter receive from 80 cents to \$1.30 a day for this piecework, but the days on which they are employed are limited to not more than two or three a week because of the lack of demand for these products in the present business depression. A list of occupations of male workers employed in these factories, with their wages for 1931-32, follows:

	Wages per day	
Firemen.....	\$1. 00 to	\$1. 50
Foremen.....	2. 00 to	3. 00
Laborers.....		1. 00
Watchmen.....		1. 00
Packers.....	1. 50 to	2. 00
Tin-can makers.....	1. 50 to	2. 50
Mechanics.....	2. 00 to	3. 30
Electricians.....	2. 00 to	3. 30
Clerks.....	1. 00 to	1. 25
Chief clerks.....	3. 00 to	5. 00

The candy and biscuit factories operating in Cuba provide employees with accident insurance according to law. No provisions are made for overtime work, as very little overtime work has been necessary during the past year.

Miscellaneous Industries

A LARGE Cuban factory making cans and other metal containers pays its machinists 27 to 35 cents an hour; truck drivers, \$17.50 a week; lithograph pressmen, 40 cents an hour; press operators, 25 cents an hour; unskilled man laborers, 16 to 22 cents an hour; unskilled boy laborers, 13 to 18 cents an hour; unskilled girl laborers, 12 to 16 cents an hour.

Linotypists are reported by the local union to be receiving \$35 a week for day work and \$35 a week for night work. Two years ago these wages were \$45 and \$52 a week, respectively.

In the canning industry laborers work only during the seasons when the fruit is ready for the market, that is, from five to six months a year. The average earnings of the workers in this industry were from \$10 to \$12 a week in 1930-31. These same laborers are now

(1932) receiving from 80 cents to \$1 a day, for a 6-day week, working 9 to 10 hours a day.

Longshoremen at the Cuban docks who obtained from \$3 to \$4 a day prior to January 1, 1930, are now receiving from \$2 to \$2.50. Truckmen's wages have also been reduced during this time from \$2.50 to \$2 a day. Mechanics' wages have been reduced from \$3.50 to \$2 a day.

Wages of skilled workmen in foundries and metal-working establishments do not exceed \$3 a day and those of unskilled workmen \$1.75 a day.

Hours and Earnings in the Shoe Industry in Germany in March, 1932

THE investigation of earnings and hours of labor in the shoe industry in Germany in March, 1932, undertaken by the German Federal Statistical Office, covered 38,757 workers, employed in 337 establishments.¹

Table 1 shows earnings and hours of labor in March, 1932, and Table 2 shows a comparison of these earnings and hours with those in March, 1929.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE SHOE INDUSTRY IN GERMANY IN MARCH, 1932

[Conversions into United States currency on basis of mark = 23.8 cents]

Group of workers	Number of workers	Hours of labor per week	Agreement hourly rate	Hourly earnings		Deductions from hourly earnings		Weekly earnings	Employers' contribution to social insurance per hour of labor
				Rate	Per cent of agreement rate	Taxes	Contribution to social insurance		
Males									
Over 21 years:			Cents	Cents		Cents	Cents		Cents
Time work.....	6,220	41.12	17.5	19.0	108.4	0.41	1.79	\$7.83	1.43
Piece work.....	9,175	39.36	19.7	22.2	112.2	.61	2.03	8.73	1.61
Group work.....	1,506	44.12	19.8	21.3	107.7	.61	1.96	9.42	1.57
Over 18 to 21 years:									
Time work.....	1,293	41.45	14.0	13.9	99.0	.23	1.33	5.75	1.07
Piece work.....	1,075	40.98	15.8	15.5	97.9	.38	1.46	6.34	1.17
Group work.....	301	43.88	15.8	15.4	97.3	.40	1.49	6.77	1.20
Females									
Over 21 years:									
Time work.....	4,447	41.87	13.2	13.7	103.1	.17	1.34	5.72	1.07
Piece work.....	8,197	41.18	14.9	14.9	99.7	.26	1.44	6.12	1.16
Group work.....	831	42.41	14.9	15.1	101.4	.24	1.45	6.41	1.17
Over 18 to 21 years:									
Time work.....	2,173	42.93	9.8	9.9	100.6	.01	.98	4.26	.79
Piece work.....	3,014	43.30	11.1	11.5	103.4	.08	1.14	5.00	.91
Group work.....	525	41.50	11.1	11.0	98.5	.01	1.05	4.55	.84
Total, time work.....	14,133	41.66	14.6	15.4	105.2	.25	1.48	6.43	1.18
Total, piece work.....	21,461	40.69	16.4	17.4	106.3	.38	1.64	7.09	1.31
Total, group work.....	3,163	43.21	16.8	17.5	104.3	.40	1.64	7.57	1.32
Total, over 21 years.....	30,376	40.90	16.9	18.0	106.8	.40	1.70	7.38	1.35
Total, over 18 to 21 years.....	8,381	42.53	12.0	12.1	100.6	.13	1.17	5.13	.94
Grand total.....	38,757	41.25	15.8	16.7	105.7	.34	1.58	6.89	1.26

¹ Germany. Statistisches Reichsamt. Wirtschaft und Statistik, 2. September-Heft, No. 18, 1932, pp. 576-581.

TABLE 2.—HOURS AND EARNINGS IN THE SHOE INDUSTRY IN GERMANY IN MARCH 1929, AND MARCH, 1932

[Includes only workers for whom reports were received for both years. Conversions into United States currency on basis of mark = 23.8 cents]

Group of workers	Hourly earnings ¹			Weekly hours of labor			Weekly earnings			
	Mar., 1929	March, 1932		Mar., 1929	March, 1932		Mar., 1929	March, 1932		
		Amount	Per cent of March, 1929, rate		Num- ber	Per cent of March, 1929, hours		Amount	Per cent of March, 1929, rate	
<i>Males</i>										
Over 21 years:	<i>Cents</i>	<i>Cents</i>								
Time work	23.4	19.1	81.8	43.10	40.86	94.8	\$10.07	\$7.81	77.6	
Piece work	27.3	22.3	81.8	42.52	39.08	91.9	11.59	8.71	75.2	
Group work	29.4	21.4	72.7	43.23	43.96	101.7	12.70	9.39	73.9	
Over 18 to 21 years:										
Time work	16.9	13.9	82.2	42.49	41.08	96.7	7.19	5.72	79.5	
Piece work	20.2	15.6	77.1	42.92	40.56	94.5	8.69	6.33	72.9	
Group work	20.4	15.4	75.5	43.04	43.88	102.0	8.79	6.77	77.0	
<i>Females</i>										
Over 21 years:										
Time work	16.5	13.7	83.2	42.98	41.70	97.0	7.09	5.72	80.7	
Piece work	18.8	14.9	79.1	42.42	40.80	96.2	7.98	6.08	76.1	
Group work	18.0	15.1	83.8	44.22	42.28	95.6	7.98	6.39	80.1	
Over 18 to 21 years:										
Time work	12.0	10.0	82.9	43.60	42.62	97.8	5.24	4.25	81.1	
Piece work	15.0	11.6	77.2	43.64	42.80	98.1	6.55	4.96	75.7	
Group work	13.4	11.0	81.9	45.32	41.18	90.9	6.07	4.52	74.4	

¹ Including overtime.

The table shows that the hourly earnings in March, 1932, were lower by 15.5 per cent than those in March, 1929. The weekly working hours had decreased on an average 4.6 per cent, and the weekly earnings decreased, on an average, 23.4 per cent from March, 1929, to March, 1932.

Wages of Railway Workers in Great Britain, 1932

THE annual report of the British Ministry of Transport relating to the numbers employed and the wages paid in the railway service has recently been issued for the year 1931-32, and a review of its principal points is given in the Ministry of Labor Gazette for September, 1932. The numbers employed at specified dates for each of the past 10 years were as follows:

March, 1923	681, 778	March, 1928	677, 148
March, 1924	700, 573	March, 1929	642, 137
March, 1925	702, 062	March, 1930	656, 530
March, 1926	689, 264	March, 1931	615, 592
April, 1927	683, 077	March, 1932	597, 971

Average Weekly Wages and Payments

THE weekly wage rates, in the case of employees who come under the conciliation agreements, are computed from the basic rate, plus bonus additions, if any, under sliding-scale arrangements; in the case of other employees, such as mechanics and artisans, from the basic

rate, plus the war wage. The average payments represent the salaries or wages, plus any additions for bonus, overtime, piecework payments, Sunday and night work, and any other payments for work performed. They do not, however, include compensation allowances, traveling expenses, or allowances for meals and lodgings.

Following an award of the National Wages Board, modifications were made in certain conditions of service and in the remuneration of staffs, other than shopmen, with effect from the beginning of the first full pay following March 28, 1931. It was also agreed between the companies and the trade-unions that deductions should be made from the earnings of the shop staffs, to operate from the same date. The effects of these deductions are reflected in the average weekly payments, but not in the average weekly salary or wage, at March, 1932. No deductions were in operation in March, 1931.

The following table shows the average weekly wages and the average weekly payments in March, 1931, and March, 1932, for various classes of workers.

AVERAGE WEEKLY WAGES AND PAYMENTS OF RAILROAD EMPLOYEES IN GREAT BRITAIN, BY OCCUPATIONS, MARCH, 1931, AND MARCH, 1932

[At par shilling=24.3 cents, penny=2 cents. Exchange rate for March, 1931, was about par; for March, 1932, shilling=18.2 cents, penny=1.5 cents]

Class of workers	Week ending March 12, 1932		Week ending March 7, 1931	
	Average weekly salary	Average weekly payments	Average weekly salary	Average weekly payments
	s. d.	s. d.	s. d.	s. d.
Carriage cleaners.....	42 10	49 6	44 4	53 1
Carters.....	50 10	55 3	50 8	57 9
Checkers.....	54 6	57 4	54 6	59 7
Engine cleaners.....	54 6	55 3	50 10	55 2
Engineers and motormen.....	89 1	96 1	88 6	102 11
Firemen and assistant motormen.....	70 4	75 6	69 7	80 4
Guards.....	64 11	69 6	64 11	74 1
Maintenance men.....	51 8	54 9	51 11	59 2
Maintenance men (laborers).....	44 2	47 8	45 7	52 0
Porters (goods staff).....	44 6	47 8	45 10	50 10
Porters, grade 2 (traffic department).....	40 4	43 2	41 9	46 4
Porters, parcel.....	49 11	52 0	49 11	55 8
Switchmen, class 1.....	65 0	66 6	65 0	71 6
Switchmen, class 2.....	55 0	56 5	55 0	60 6
Signalmen.....	59 4	64 0	59 3	68 7
Ticket collectors, class 1.....	58 1	63 2	58 1	65 8
Ticket collectors, class 2.....	54 0	57 0	54 0	59 11
Mechanics and artisans, locomotive, car, and freight-car department:				
Erectors, fitters, and turners.....	63 1	77 1	63 7	80 8
Car and freight-car builders and repairers.....	59 7	75 1	59 7	77 5
Machinists and machinemen.....	55 9	70 9	55 8	74 3
Smiths.....	64 8	75 11	64 8	80 1
Laborers.....	46 0	53 8	46 1	56 7
Laborers (civil engineering).....	46 7	49 9	46 6	51 11

Wage Reduction in Scottish Woolen Industry

A REPORT from Austin C. Brady, United States consul at Edinburgh, under date of October 18, 1932, states that the operatives in Scottish woolen mills have agreed to accept a 10 per cent reduction in wages, effective January 1, 1933. The cut was agreed upon at a conference between representatives of the Scottish Woolen Trade Employers' Association and of the trade-unions to which many of the workers belong. The representatives of the workers tried at first

to secure the retention of the present scale for at least six months, and failing in that, to limit the cut to 5 per cent. The employers' representatives, however, stood firm for the 10 per cent cut, declaring that if agreement on this figure could not be reached, they would insist upon arbitration. Present wage rates, they maintained, are $83\frac{1}{2}$ per cent higher than the adjusted pre-war rates, while the cost of living shows an increase of only 41 per cent, and on this ground they would, if the matter were carried to arbitration, demand a heavier reduction than 10 per cent. Under the circumstances, the workers considered it advisable to consent to their terms. The application of the cut is to be general throughout the mills.

Time workers, piece workers, apprentices, and "young persons" employed in about 50 Scottish woolen mills will be affected by the cut. Under present scales the average minimum pay of time workers steadily employed ranges from 32s.^a to 48½s. a week, and of piece workers from 36½s. to 62½s.

Lancashire Cotton Spinners' Hours and Wages¹

AT THE time the trouble in the Lancashire cotton-weaving industry was settled (see Monthly Labor Review, November, 1932, p. 1113), negotiations looking toward a reduction of wages and some changes in hours and conditions were under way between the organizations of the employers and of the workers in the cotton-spinning branch of the industry. The manufacturers at first proposed a reduction of 2s. 9d. in the pound, but during the negotiations this was reduced to about 1s. 6½d., and this the union representatives agreed to accept, coupled as it was with plans for conciliation procedure, formal establishment of the 48-hour week, and some other changes. When the terms were reported back to the workers, however, they were profoundly disappointed, and at a representatives' meeting, held on October 29, the spinners voted to refuse to accept the agreement, and to strike on the following Monday against all mills which tried to enforce the new terms. The cardroom operatives, though willing themselves to accept the new terms, voted to stand with the spinners.

The strike was reported to be fairly complete, but according to the rules of the unions, it would not be legitimate until authorized by a vote of at least 80 per cent of the membership of the unions affected. A ballot was taken as speedily as possible, with the result that the spinners, with a total vote of 33,805, gave a majority of 6,699 for continuing the strike, while the cardroom workers out of a vote of 42,998 gave a majority of 13,298 against continuance. The advocates of continuance having failed decisively to secure their necessary majority, the strike was called off, work was resumed on November 7, and the new agreement was signed on the following day. The *Economist* (London) gives the following summary of its terms:

Conciliation procedure.—For the purpose of the more effective avoidance of stoppages of work, the two sides agree to set up a conciliation committee consisting of not less than four nor more than six from each side. A standing chairman will be appointed for a definite period and there will also be appointed two inde-

^a Shilling at par=24.3 cents; exchange rate for September, 1932, was 17.4 cents.

¹ Data are from report by A. R. Thomson, American consul at Manchester, Nov. 9, 1932; Manchester (England) *Guardian*, Oct. 31 and Nov. 9, 1932; and *Economist* (London), Nov. 12, 1932.

pendent members, one from each side. The conciliation committee will first endeavor to settle the matter in dispute by agreement, but failing settlement the standing chairman, after consultation with the independent members, will make a recommendation, and he will also have the authority to make an award if invited to do so in writing by both sides. This provision will remain in operation for a period of three years from the date of signing (November 8) and thereafter will be terminable on six months' notice being given on either side.

Bad-spinning complaints.—Both sides agree that any complaints regarding bad spinning shall be considered by the existing machinery, but any extension to that machinery may be provided to avoid stoppage of work.

Hours.—The 48-hour normal week in the cotton-spinning industry will be restored, and later discussions will take place on the means by which working hours may be made as fully effective as possible.

Wages.—These will be reduced by 14 per cent on standard piece-price lists, i. e., from 82½ to 68½ per cent, which is equal to a reduction of 1s. 6½d. in the pound. The two sides will discuss the question of the wages of low-paid operatives without delay.

Reinstatement.—The employers have strongly recommended all their local associations to offer employment as speedily as possible to operatives who have been displaced; and should any difficulties exist at the end of two months the situation will again be reviewed generally by the central organizations.

In commenting on these terms, the Economist states that the low-paid operatives, whose wages remain unsettled, number about 28,000. "In some instances the mills have already announced that the reduction of 1s. 6½d. in the pound will not be enforced on these low-paid operatives."

Wages and Hours in the Jute Industry of Bengal, 1931

THE annual report of the chief inspector of factories in Bengal for the year 1931 contains a table giving the average wages per month of different classes of workers in the jute mills. According to the text of the report multiple shifts were formerly in common use in jute mills, but for some time past efforts had been made to secure the substitution of a single-shift system of working. In March, 1931, those mills still employing the multiple-shift system changed over to the single shift, producing, the inspector considers, a marked improvement in the general situation. "The multiple-shift system, unquestionably, was responsible for all manner of abuses in respect of illegal employment and the general exploitation of the workers by sirdars, time-babus, and others, and the complete change which has now been effected marks a definite advance in the industrial development of the Province." Some changes in hours were made at the time the single shift was adopted.

In the jute industry, when the general change over to the single-shift system was made, a regular 4-day week of 10 hours per day was established in place of the previous 4-day week of 13½ hours per day with an idle week each month. In effecting this change managers in the different areas tried to work together to establish a standard rate of pay for the various classes of workers, but apparently they have not been too successful. One attempt to level up wages with those paid in a neighboring mill was the cause of a prolonged strike. It has been possible, however, to eliminate the old system of augmenting pay by means of khoraki, bonus, etc., and to establish consolidated rates in the individual mills. The effect has been a slight reduction in the total monthly wages earned.

The following table shows the average wages received per month:

AVERAGE MONTHLY WAGES IN JUTE MILLS OF BENGAL, BY OCCUPATION, 1931
[Conversions into United States currency on basis of par value of rupee=36.5 cents; anna=2.28 cents; and pice=0.57 cent. Average exchange rate of rupee for 1931=33.7 cents]

Department and occupation	Average monthly wages		Department and occupation	Average monthly wages	
	Indian currency	United States currency		Indian currency	United States currency
<i>Batching</i>					
Batchers:	<i>Rs. A. P.</i>		Weaving:	<i>Rs. A. P.</i>	
Foremen.....	38 1 1	\$13.90	Head foremen.....	55 1 9	\$20.15
Selectors.....	21 6 7	7.84	Line foremen.....	33 7 4	12.23
Cutters.....	14 3 7	5.22	Daily foremen.....	22 4 0	8.12
Softeners:			Hessian weavers (piece).....	21 11 10	7.97
Foremen.....	24 3 5	8.86	Sacking weavers (piece).....	23 5 1	8.51
Feeders (women).....	15 0 2	5.49	Coolie foremen.....	20 2 11	7.41
Receivers (women).....	15 0 2	5.49	Sweepers (women).....	9 14 6	3.64
Teasers:			Mochi.....	16 3 4	5.93
Foremen.....	23 0 9	8.45	Dressing and beaming:		
Feeders (women).....	9 4 5	3.40	Foremen.....	30 10 7	11.22
Receivers.....	7 1 9	2.63	Beamers and dressers.....	21 11 4	7.94
Carrying coolies.....	12 4 2	4.48	Finishing:		
Dust shakers:			Dampers—Coolies.....	11 3 8	4.13
Foremen.....	18 8 0	6.75	Calendar workers—		
Coolies.....	12 12 3	4.67	Foremen.....	27 1 4	9.90
<i>Preparing</i>			Coolies.....	13 0 4	4.77
Breaker carding machines:			Measuring workers—		
Head foremen.....	31 1 6	11.37	Coolies.....	11 13 0	4.31
Line foremen.....	20 13 0	7.60	Markmen.....	19 11 0	7.19
Feeders (women).....	9 0 5	3.31	Press workers—		
Receivers (women).....	10 4 9	3.79	Foremen.....	27 0 0	9.86
Pickers.....	10 15 9	4.04	Packing coolies.....	15 3 0	5.54
Finishing carding machines:			Lapping-machine workers—		
Line foremen.....	20 11 3	7.57	Lappers.....	11 14 6	4.37
Feeders (women).....	9 9 11	3.55	Sack sewing:		
Receivers (women).....	9 7 6	3.48	Sewing-machine workers—		
Beltmen.....	21 1 1	7.69	Foremen.....	32 4 3	11.79
Coolies.....	10 14 0	3.97	Machine sewers (piece).....	24 0 7	8.79
Drawing machines:			Hand sewers—		
Head foremen.....	34 11 3	12.68	Women.....	14 0 8	5.16
Line foremen.....	21 6 8	7.85	Coolies (women).....	9 12 0	3.56
Feeders (women).....	9 14 3	3.62	Engineering section—engine		
Receivers (women).....	9 13 1	3.59	staff:		
Coolies.....	10 12 5	3.95	Head mistry.....	63 7 11	23.22
Roving machines:			Fitters.....	31 12 7	11.63
Head foremen.....	35 6 7	12.95	Oilier foremen.....	26 5 4	9.63
Line foremen.....	23 10 4	8.65	Oilers.....	15 1 4	5.52
Feeders (women).....	10 10 3	3.90	Firemen tindal.....	39 3 3	14.32
Rovers.....	13 1 1	4.77	Firemen.....	25 1 3	9.16
Coolies.....	11 4 7	4.15	Coal coolies.....	16 2 0	5.89
Coolie foremen.....	14 15 10	5.51	Cranemen.....	17 6 0	6.34
Shifting foremen.....	16 4 11	5.99	Electric mistry.....	55 10 7	20.34
Shifters.....	11 15 11	4.42	Head masons.....	20 5 4	10.72
Sweepers (women).....	8 13 10	3.27	Masons.....	20 0 0	7.30
Spinning frames:			Masons' coolies.....	12 0 0	4.38
Head foremen.....	46 13 6	17.12	Workshop hands:		
Line foremen.....	27 8 4	10.06	Machine shop and fitting—		
Shifting foremen.....	23 13 6	8.73	Carpenters (Chinese).....	51 8 0	18.80
Coolie foremen.....	20 1 5	7.35	Head carpenters (Indian).....	32 14 7	12.04
Warp spinners.....	13 14 4	5.09	Carpenters (Indian).....	24 4 0	8.85
Wet spinners.....	15 13 1	5.78	Head wood turners.....	29 0 1	10.59
Coolies.....	11 7 0	4.17	Wood turners.....	21 2 8	7.76
Bobbin cleaners.....	12 6 0	4.52	Head turners, metal.....	38 13 9	14.22
Beltmen.....	21 5 5	7.81	Turners, metal.....	26 10 8	9.76
Full-time shifters.....	11 5 4	4.15	Machine men (drillers, planers, shapers, etc.).....	24 2 8	8.85
Twist frames:			Head painters.....	28 14 8	10.58
Foremen.....	23 10 3	8.64	Painters.....	21 2 0	7.71
Twisters (women).....	13 1 7	4.81	Tinsmithy—		
Coolies.....	11 6 0	4.15	Head mistry.....	36 0 0	13.14
Winding department:			Tinsmiths.....	22 10 8	8.30
Head foremen.....	34 9 9	12.67	Blacksmith shop:		
Assistant foremen.....	23 4 6	8.52	Head mistry (foreman).....	31 8 0	11.50
Coolie foremen.....	16 11 2	6.10	Blacksmiths.....	25 12 0	9.40
Coolies (day workers).....	10 6 8	3.83	Hammermen.....	12 9 0	4.59
Warp winders (piece).....	14 15 3	5.47			
Wet winders (piece).....	16 11 11	6.15			

Wage Rates of Port Workers in the Netherlands ¹

NEW collective agreements affecting the port workers of Amsterdam and Rotterdam went into effect February 8, 1932. No changes were made in the usual hours of labor, these remaining 8½ per day and 48 per week. The new wage scale, however, is considerably below the old rates. The table following shows the new rates for specified types of work.

RATES OF WAGES OF PORT WORKERS IN AMSTERDAM AND ROTTERDAM, FIXED BY AGREEMENT, FEBRUARY, 1932

[Conversions into United States currency on basis of florin=40.2 cents]

Type or place of employment, and occupation	Weekly rate			
	Amsterdam		Rotterdam	
	Nether-lands cur-rency	United States cur-rency	Nether-lands cur-rency	United States cur-rency
Stevedoring, grain silos, etc.:	<i>Florins</i>		<i>Florins</i>	
Stevedores.....	26.00	\$10.45	1 26.00	\$10.45
Electric-crane operators.....	27.90	11.22		
Others in service before March 3, 1924.....	2 27.40	11.01		
Guaranteed minimum.....	23.70	9.53	23.70	9.53
Grain elevators: ³				
First engineers.....	29.75	11.96	29.75	11.96
Second engineers, skippers, boatswains, and weigh-ers.....	27.90	11.22	27.90	11.22
Skilled stokers.....	26.00	10.45	26.00	10.45
Other stokers, entrance rate.....	23.70	9.53	23.70	9.53
Bonded warehouses:				
Helpers.....	27.00	10.85		
Porters.....	31.60	12.70		
General laborers.....	4 2.45	4 98	4 2.45	4 98
	5 2.75	5 1.11	5 2.75	5 1.11
	6 3.35	6 1.35	6 3.35	6 1.35
			7 3.67½	1.48
Barges: ⁸				
Bargemen.....			1 23.20	9.33
Skippers (motor barges).....			28.80	11.58
General workers.....			9 5.20	9 2.09
			10 2.75	10 1.11
			11 3.35	11 1.35

¹ With guaranty that total wage (including overtime, premiums, etc.) will amount to at least 27.40 florins (\$11.01).

² Minimum rate.

³ Minimum rate including possible bonus.

⁴ Per 4-hour shift.

⁵ Per 4½-hour shift.

⁶ Per 5½-hour shift (Saturday).

⁷ Per 6-hour shift (evening shift) but not including allowance for evening work.

⁸ Plus 2.80 florins (\$1.13) per barge per night for waiting time outside harbor, plus 4.00 florins (\$1.61) per man for Sunday waiting time.

⁹ Per day.

¹⁰ Per half day.

¹¹ For Saturday, to 2.30 p. m.

Extra and Overtime Work

Amsterdam.—An extra payment (above the regular rate) is made for work outside the regular hours. Thus, in Amsterdam the extra payment is as follows:

Time work:	Florins per shift
Evening shift (4 hours).....	0. 80 (32. 2 cents)
Early night shift (4½ hours).....	1. 35 (54. 3 cents)
Late night shift (4 hours).....	1. 15 (46. 2 cents)
Piece work:	Florins per hour
Stevedores.....	0. 23 (9. 2 cents)

¹ Data are from report of Charles L. Hoover, American consul general at Amsterdam, Sept. 28, 1932.

Permanent employees (laborers) may be required to work as much as three hours overtime per day without extra pay. Other workers are paid at the following hourly rates: For work done after the regular hours and on Saturday afternoon up to 6 o'clock, 0.80 florin (32.2 cents); work after the evening shift, 0.90 florin (36.2 cents); work after the night shift, 1 florin (40.2 cents); for any part of Sunday and for holidays, 3 florins (\$1.21) extra.

Engineers in permanent service receive 0.93 florin (37.4 cents) per hour for overtime, and all other workers in this category receive 0.80 florin (32.2 cents) per hour.

Rotterdam.—As in Amsterdam, permanent laborers may be required to work up to three hours' overtime per day without extra pay. The following rates are paid to other workers for work done after the regular hours and on Saturday afternoon up to 6 o'clock: For time workers, 0.90 florin (36.2 cents) per hour; for piece workers, 0.28 florin (11.3 cents) per hour in addition to what is earned in accordance with the provisions of the piece-work regulations. For work done on Saturday afternoon between 1.30 and 6 o'clock an additional allowance is paid amounting to 0.90 florin (36.2 cents) per hour for time workers, and 0.28 florin (11.3 cents) for piece workers. For overtime on Sundays and on holidays $\frac{1}{48}$ part of the weekly wages per hour is paid, increased by the allowance for evening and/or night work; as well as an additional allowance of 3 florins (\$1.21) per 4-hour or 4½-hour shift and of 4.50 florins (\$1.81) for the 6-hour evening shift on Sundays.

Bargemen are paid for overtime at the following rates:

	Florins
Between 5.30 and 10 p. m.....	0. 65 (26. 1 cents)
After 10 p. m. and before 7 a. m.....	. 90 (36. 2 cents)
On Mondays before 7 a. m.....	1. 00 (40. 2 cents)
On Saturdays before 7 a. m.....	. 90 (36. 2 cents)
On Saturdays from 2.30 to 6 p. m.....	. 65 (26. 1 cents)
On Saturdays from 6 to 12 p. m.....	1. 00 (40. 2 cents)
On Sundays and holidays.....	1. 00 (40. 2 cents)

TREND OF EMPLOYMENT

Summary for October, 1932

EMPLOYMENT increased 1.1 per cent in October, 1932, as compared with September, 1932, and pay-roll totals increased 3.8 per cent. These figures are based on the pay rolls ending nearest the 15th of the month.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the pay roll for one week, for both September and October, 1932, together with the per cents of change in October are shown in the following tabulation:

SUMMARY OF EMPLOYMENT AND EARNINGS, SEPTEMBER AND OCTOBER, 1932

Industrial groups	Estab- lish- ments	Employment		Per cent of change	Earnings in 1 week		Per cent of change
		Septem- ber, 1932	October, 1932		Septem- ber, 1932	October, 1932	
Manufacturing.....	18,211	2,632,768	2,686,577	¹ +2.4	\$44,790,253	\$46,968,281	¹ +4.7
Coal mining.....	1,303	232,218	254,809	+9.7	3,878,587	5,167,352	+33.2
Anthracite.....	160	76,361	87,359	+14.4	1,868,237	2,652,835	+42.0
Bituminous.....	1,143	155,857	167,450	+7.4	2,010,350	2,514,517	+25.1
Metalliferous mining.....	287	20,352	21,230	+4.3	382,438	404,721	+5.8
Quarrying and nonmetallic mining.....	620	23,072	23,098	+1	362,231	357,693	-1.3
Crude petroleum producing.....	284	22,944	23,218	+1.2	650,304	658,562	+1.3
Public utilities.....	12,311	627,809	618,596	-1.5	17,136,818	17,037,432	-6
Telephone and telegraph.....	8,282	274,217	270,117	-1.5	7,217,002	7,202,542	-2
Power and light.....	3,528	216,867	214,057	-1.3	6,273,003	6,247,291	-4
Electric-railroad and motor- bus operation and main- tenance.....	501	136,725	134,422	-1.7	3,646,813	3,587,599	-1.6
Trade.....	16,799	399,169	414,795	+3.9	8,459,917	8,741,164	+3.3
Wholesale.....	2,664	69,056	69,667	+9	1,850,106	1,872,254	+1.2
Retail.....	14,135	330,113	345,131	+4.5	6,609,811	6,868,910	+3.9
Hotels.....	2,557	138,765	135,846	-2.1	² 1,866,594	² 1,851,301	-8
Canning and preserving.....	939	87,888	56,898	-35.3	941,928	650,293	-31.0
Laundries.....	1,017	61,515	60,661	-1.4	958,494	932,458	-2.7
Dyeing and cleaning.....	382	12,238	12,096	-1.2	226,637	218,519	-3.6
Building construction.....	10,397	84,854	85,300	+5	2,145,665	2,088,348	-2.7
Banks, brokerage, insurance, and real estate.....	2,881	113,131	112,730	-4	4,063,674	4,049,746	-3
Total.....	67,988	4,456,723	4,505,857	+1.1	85,863,540	89,125,870	+3.8

¹ Weighted per cent of change for the combined 89 manufacturing industries, wherein the proper allowance is made for the relative importance of the several industries so that the figures represent all establishments of the country in the 89 industries surveyed; the remaining per cents of change, including total, are unweighted.

² The amount of pay roll given represents cash payments only; the additional value of board, room, and tips can not be computed.

An additional group covering employees in banks, brokerage, insurance, and real-estate offices has been added to the bureau's monthly employment survey, and data concerning this group are presented for the first time in the foregoing summary table.

Data are not yet available concerning railroad employment for October, 1932. (See section "Class I steam railroads" for latest figures reported.)

Per capita weekly earnings in October, 1932, for each of the 17 industrial groups included in the bureau's monthly trend-of-employment survey, together with the per cents of change in October, 1932, as compared with September, 1932, and October, 1931, are given in the table following. These per capita weekly earnings must not be confused with full-time weekly rates of wages; they are per capita weekly earnings computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

PER CAPITA WEEKLY EARNINGS IN 17 INDUSTRIAL GROUPS IN OCTOBER, 1932, AND COMPARISON WITH SEPTEMBER, 1932, AND OCTOBER, 1931

Industrial group	Per capita weekly earnings in October, 1932	Per cent of change October, 1932, compared with—	
		September, 1932	October, 1931
Manufacturing.....	\$17.48	+2.3	-17.1
Coal mining:			
Anthracite.....	30.37	+24.1	-.6
Bituminous.....	15.02	+16.4	-18.4
Metalliferous mining.....	19.06	+1.4	-15.1
Quarrying and nonmetallic mining.....	15.49	-1.3	-24.0
Crude petroleum producing.....	28.36	+1.1	-17.0
Public utilities:			
Telephone and telegraph.....	26.66	+1.3	-8.8
Power and light.....	29.19	+1.9	-7.4
Electric-railroad and motor-bus operation and maintenance.....	26.69	+1.1	-12.4
Trade:			
Wholesale.....	26.87	+1.3	-12.5
Retail trade.....	19.90	-.6	-12.4
Hotels (cash payments only) ¹	13.63	+1.3	-14.8
Canning and preserving.....	11.43	+6.6	-11.0
Laundries.....	15.37	-1.3	-14.9
Dyeing and cleaning.....	18.07	-2.4	-17.4
Building construction.....	24.48	-3.2	(²)
Banks, brokerage, insurance, and real estate.....	35.92	(³)	(³)
Total.....	\$ 19.26	+3.0	-14.1

¹ The additional value of board, room, and tips can not be computed.

² Data not available.

³ No change.

⁴ Does not include building construction or banks, etc.

Employment in Selected Manufacturing Industries in October, 1932

Comparison of Employment and Pay-Roll Totals in October, 1932, with September, 1932, and October, 1931

EMPLOYMENT in manufacturing industries increased 2.4 per cent in October, 1932, as compared with September, 1932, and pay-roll totals increased 4.7 per cent over the month interval. Comparing October, 1932, with October, 1931, decreases of 13.1 per cent in employment and 27.8 per cent in pay rolls are shown over the 12-month period.

The per cents of change in employment and pay-roll totals in October, 1932, as compared with September, 1932, are based on returns made by 18,211 establishments in 89 of the principal manufacturing industries in the United States, having in October 2,686,577 employees whose earnings in one week were \$46,968,281.

The index of employment in October, 1932, was 59.9 as compared with 58.5 in September, 1932, 56.0 in August, 1932, and 68.9 in

October, 1931; the pay-roll index in October, 1932, was 39.9 as compared with 38.1 in September, 1932, 36.3 in August, 1932, and 55.3 in October, 1931. The 12-month average for 1926 equals 100.

In Table 1, which follows, are shown the number of identical establishments reporting in both September and October, 1932, in the 89 manufacturing industries, together with the total number of employees on the pay rolls of these establishments during the pay period ending nearest October 15, the amount of their weekly earnings in October, the per cents of change over the month and year intervals, and the indexes of employment and pay roll in October, 1932.

The monthly per cents of change for each of the 89 separate industries are computed by direct comparison of the total number of employees and of the amount of weekly earnings reported in identical establishments for the two months considered. The per cents of change over the month interval in the several groups and in the total of the 89 manufacturing industries are computed from the index numbers of these groups, which are obtained by weighting the index numbers of the several industries in the groups by the number of employees or wages paid in the industries. The per cents of change over the year interval in the separate industries, in the groups, and in the totals are computed from the index numbers of employment and pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1932, AND OCTOBER, 1931

Industry	Es- tab- lish- ments report- ing in both Sep- tem- ber and Octo- ber, 1932	Employment			Pay-roll totals			Index num- bers October, 1932 (average 1926=100)	
		Number on pay roll Oc- tober, 1932	Per cent of change		Amount of pay roll (1 week) October, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		
Food and kindred products.	3,079	264,149	+4.2	-4.3	\$5,393,013	+1.5	-17.5	87.1	69.7
Slaughtering and meat packing.....	234	87,510	+7	-1.5	1,805,402	(1)	-16.6	87.7	70.8
Confectionery.....	325	43,294	+9.4	+4.6	626,842	+6.4	-11.8	97.3	73.6
Ice cream.....	391	11,320	-10.5	-10.7	301,235	-10.6	-23.4	68.5	55.0
Flour.....	437	16,255	+1	-4.3	364,558	+4.9	-13.9	84.7	72.3
Baking.....	972	63,343	+5	-10.2	1,423,888	-4	-19.5	80.9	68.5
Sugar refining, cane.....	15	8,268	+5	-2.5	200,000	-5.6	-14.2	77.8	64.7
Beet sugar.....	57	18,012	+241.7	+20.2	297,231	+154.6	-3.2	213.9	125.7
Beverages.....	332	10,400	-5.7	-13.5	247,267	-10.9	-26.6	72.6	55.2
Butter.....	316	5,747	-4.9	-8.2	126,590	-5.9	-17.9	96.8	78.5
Textiles and their products.	3,083	648,623	+5.1	-2.2	8,990,715	+5.3	-16.0	74.7	52.1
Cotton goods.....	694	239,434	+5.5	+2.4	2,654,146	+6.7	-10.8	75.9	53.6
Hosiery and knit goods.....	458	109,616	+7.3	+2.7	1,602,868	+14.3	-5.5	86.8	66.7
Silk goods.....	244	48,488	+6.1	-11.1	662,473	+8.8	-28.0	64.9	44.9
Woolen and worsted goods.....	252	58,643	+1.0	+12.1	958,477	+6	-2.4	76.9	56.7
Carpets and rugs.....	29	14,048	+14.7	-22.0	236,018	+36.8	-32.0	54.2	34.6
Dyeing and finishing tex- tiles.....	149	34,051	+1	-6.0	640,236	-4.0	-18.8	77.9	57.6
Clothing, men's.....	370	63,185	+3.8	-7.9	939,745	+2.3	-19.9	70.9	43.9
Shirts and collars.....	115	16,288	+11.2	-15.9	176,668	+21.2	-26.3	63.8	42.0
Clothing, women's.....	385	27,166	+5.7	-12.0	510,058	+5.6	-28.6	70.6	48.1
Millinery.....	131	10,085	+1.3	+2.0	161,657	-15.9	-16.8	76.7	49.9
Corsets and allied garments.....	30	5,590	+5.0	-2.2	90,143	+21.0	-6.7	101.0	85.6
Cotton small wares.....	112	9,489	+10.9	-6.4	151,449	+15.9	-18.3	81.0	61.5
Hats, fur-felt.....	38	6,110	-4	-5.5	126,989	-9.4	+1.2	74.1	51.7
Men's furnishings.....	76	6,430	+14.4	-10.5	79,788	+20.6	-33.6	68.8	45.4

¹ Less than one-tenth of 1 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1932, AND OCTOBER, 1931—Con.

Industry	Es- tab- lish- ments report- ing in both Sep- tem- ber and Octo- ber, 1932	Employment			Pay-roll totals			Index num- bers October, 1932 (average 1926=100)	
		Number on pay roll Oc- tober, 1932	Per cent of change		Amount of pay roll (1 week) October, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		
Iron and steel and their products, not including machinery	1,399	297,467	+2.5	-19.4	\$4,373,077	+9.9	-38.7	53.1	26.6
Iron and steel	209	175,105	+3.3	-16.5	2,310,501	+13.5	-39.4	53.0	23.2
Cast-iron pipe	42	5,749	+5.3	-42.1	70,354	-6.2	-59.4	29.6	14.9
Structural and ornamental ironwork	190	14,375	-3.5	-37.2	252,634	-1.2	-51.8	41.2	23.6
Hardware	110	20,845	+2.1	-20.4	275,807	+7.2	-42.4	49.2	24.3
Steam fittings and steam and hot-water heating apparatus	97	14,103	+5.2	-30.1	267,237	+15.6	-38.4	37.3	23.6
Stoves	162	17,571	+7.2	-13.8	347,235	+17.6	-23.6	55.4	37.2
Bolts, nuts, washers, and rivets	69	8,406	+2.1	-14.8	124,945	+13.8	-33.6	62.3	33.6
Cutlery (not including silver and plated cutlery) and edge tools	128	9,023	+1.3	-12.0	166,640	+12.0	-23.8	64.4	43.8
Forgings, iron and steel	61	5,416	+10.7	-19.7	78,201	+18.0	-43.4	55.2	25.9
Plumbers' supplies	70	5,935	+1.9	-31.7	96,993	+4.6	-51.8	51.2	28.7
Tin cans and other tinware	59	9,088	-5.4	-4	180,925	-9.5	-7.2	76.8	47.4
Tools (not including edge tools, machine tools, files, or saws)	132	6,796	+2.1	-27.4	111,913	+8.3	-39.4	60.2	35.1
Wirework	70	5,055	-1.3	-14.0	89,692	+1.8	-29.1	91.5	64.4
Lumber and allied products	1,616	127,356	+3.4	-21.5	1,696,024	+6.7	-41.0	39.0	22.2
Lumber, sawmill	643	61,721	+2.5	-21.0	722,481	+5.5	-42.5	36.1	19.1
Lumber, millwork	469	18,230	-7	-28.7	266,004	+2	-45.1	34.2	20.1
Furniture	483	46,355	+6.8	-21.3	693,013	+11.6	-38.0	48.4	28.7
Turpentine and rosin	21	1,050	+7.5	-7.9	14,526	+7.3	-22.2	45.2	37.6
Leather and its manufac- tures	512	138,324	+1.4	-3	2,219,727	+8	-2.7	78.1	53.1
Leather	163	24,289	+4.3	-6.3	469,244	+7.7	-15.5	69.9	55.4
Boots and shoes	349	114,035	+7	+1.1	1,750,483	-9	+1.9	80.1	52.5
Paper and printing	1,944	220,144	+1.8	-9.9	5,614,154	+2.5	-21.4	80.2	66.7
Paper and pulp	406	78,871	+1.5	-5.5	1,470,560	+5.3	-20.5	75.2	52.0
Paper boxes	310	20,833	+5.5	-13.1	386,569	+8.2	-22.9	73.6	63.8
Printing, book and job	759	49,145	+1.2	-14.9	1,333,026	+1.5	-25.4	72.6	59.5
Printing, newspapers and periodicals	469	71,295	+1.2	-7.3	2,423,999	+8	-18.7	97.4	85.4
Chemicals and allied prod- ucts	1,017	137,750	+2.9	-9.1	3,064,678	+2.4	-22.9	75.5	60.9
Chemicals	114	20,359	+2.9	-11.7	489,403	+5.5	-25.0	84.7	61.7
Fertilizers	200	5,962	+6.3	-8.0	74,153	+1.6	-27.1	45.1	30.1
Petroleum refining	114	43,049	-2.4	-10.2	1,160,290	-4.5	-21.6	61.8	52.2
Cottonseed oil, cake, and meal	50	2,907	+16.9	+33.6	30,440	+11.4	-6.8	54.1	44.9
Druggists' preparations	41	7,526	+2.9	-17.1	152,568	+3.4	-25.7	71.7	70.4
Explosives	24	3,025	+5.7	-20.3	60,465	+14.1	-37.5	75.7	51.2
Paints and varnishes	364	15,355	+2.0	-12.1	342,253	+5.8	-23.5	68.2	54.6
Rayon	22	27,073	+6.6	-9.1	467,979	+6.8	-22.5	139.6	118.3
Soap	88	12,404	+2.5	-4.6	287,127	+1.3	-17.0	96.9	84.4
Stone, clay, and glass prod- ucts	1,347	88,148	+2.5	-25.0	1,452,451	+5.8	-41.1	44.6	27.5
Cement	125	14,715	+2.4	-24.6	258,887	+2.8	-44.4	42.9	25.2
Brick, tile, and terra cotta	680	18,984	-2.7	-33.3	228,697	-5.1	-52.9	28.8	13.0
Pottery	119	14,335	+10.2	-18.1	236,890	+25.8	-32.1	60.2	37.0
Glass	195	33,975	+5.0	-17.7	594,609	+8.1	-32.1	57.0	39.4
Marble, granite, slate, and other stone products	228	6,139	-2.2	-31.0	133,368	-9	-46.2	51.8	35.3

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1932, AND OCTOBER, 1931—Con.

Industry	Es- tab- lish- ments report- ing in both Sep- tem- ber and Octo- ber, 1932	Employment			Pay-roll totals			Index num- bers October, 1932 (average 1926=100)	
		Number on pay roll Oc- tober, 1932	Per cent of change		Amount of pay roll (1 week) October, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		Sep- tem- ber to Octo- ber, 1932	Octo- ber, 1931, to Octo- ber, 1932		
Nonferrous metals and their products.....	627	77,952	+3.1	-17.7	\$1,406,053	+10.1	-30.3	54.0	37.0
Stamped and enameled ware.....	88	12,584	-2.1	-12.7	214,405	+2	-26.4	60.4	40.1
Brass, bronze, and copper products.....	209	27,263	+1.6	-19.3	467,118	+7.3	-33.0	51.1	31.5
Aluminum manufactures.....	26	4,894	+4	-18.0	79,797	+14.7	-23.0	47.7	29.5
Clocks, time-recording de- vices, and clock move- ments.....	22	3,877	+3.7	-33.2	61,407	+16.5	-42.2	41.6	31.4
Gas and electric fixtures, lamps, lanterns, and re- flectors.....	54	4,858	+5.4	-21.6	98,691	+3.9	-34.3	66.6	46.8
Plated ware.....	54	7,715	+5.2	-11.0	163,527	+20.1	-25.5	63.7	45.5
Smelting and refining cop- per, lead, and zinc.....	27	7,363	+7.1	-17.6	127,949	+9.9	-34.2	58.8	39.3
Jewelry.....	147	9,398	+8.1	-15.7	193,159	+17.0	-25.6	44.0	32.6
Tobacco manufactures.....	245	56,585	+2.6	-9.7	731,262	+3.0	-18.5	73.9	55.8
Chewing and smoking to- bacco and snuff.....	33	10,330	+2.6	+5.8	141,694	-1.2	-6.0	89.8	73.3
Cigars and cigarettes.....	212	46,255	+2.7	-11.7	589,568	+3.7	-20.2	71.9	53.7
Transportation equipment.....	421	190,760	-12.2	-25.2	3,603,837	+4.7	-41.2	39.5	24.7
Automobiles.....	245	151,233	-15.6	-26.1	2,692,370	+5.3	-43.7	38.2	22.7
Aircraft.....	30	5,698	+3.3	-25.9	178,407	+4.1	-24.6	166.8	174.1
Cars, electric and steam railroad.....	39	5,770	+9.5	-7.5	104,432	+11.8	-15.6	21.1	12.4
Locomotives.....	15	2,449	-4.3	-37.6	48,286	+9	-51.0	13.8	9.4
Shipbuilding.....	92	25,610	-1.8	-24.6	580,342	+1.4	-36.1	67.7	52.4
Rubber products.....	150	63,661	+2.6	-10.6	1,168,300	+9.3	-23.6	63.9	41.1
Rubber tires and inner tubes.....	40	34,387	-4	-9.9	617,740	+7.2	-26.8	59.0	34.5
Rubber boots and shoes.....	8	9,562	+5.1	-25.2	167,279	+6.4	-30.4	52.0	39.7
Rubber goods, other than boots, shoes, tires, and inner tubes.....	102	19,712	+7.0	-3.5	383,281	+14.8	-13.7	84.3	61.2
Machinery, not including transportation equip- ment.....	1,833	280,164	+7	-29.2	5,129,011	+3.4	-43.4	45.6	27.1
Agricultural implements.....	81	4,978	-7.8	-39.4	79,177	-3.8	-40.4	19.4	14.0
Electrical machinery, ap- paratus, and supplies.....	292	104,177	-2.5	-34.8	2,062,386	-4	-47.7	49.3	32.8
Engines, turbines, trac- tors, and water wheels.....	88	15,087	+1.3	-29.9	304,456	+10.0	-37.9	39.8	24.9
Cash registers, adding ma- chines, and calculating machines.....	44	12,898	+1.4	-16.6	306,224	+3.1	-23.0	63.8	46.8
Foundry and machine- shop products.....	1,075	97,001	+1.4	-25.0	1,561,011	+5.1	-41.9	44.0	23.3
Machine tools.....	150	10,259	-2.2	-45.6	182,499	-2.9	-57.5	29.6	17.1
Textile machinery and parts.....	43	6,450	+2.4	-23.1	113,313	+3.0	-36.1	53.6	34.0
Typewriters and supplies.....	18	8,655	+2	-24.0	123,743	+4.3	-42.6	55.9	30.4
Radio.....	42	20,650	+17.2	-28.4	396,202	+12.2	-41.0	79.8	62.9
Railroad repair shops.....	938	95,494	+4.5	-15.0	2,125,979	+8.1	-30.0	48.6	36.2
Electric railroad.....	395	20,562	-1.4	-11.7	511,764	-3.6	-25.4	65.5	51.8
Steam railroad.....	543	74,932	+5.4	-15.4	1,614,215	+9.5	-30.4	47.3	35.0
Total, 89 industries.....	18,211	2,686,577	+2.4	-13.1	46,968,281	+4.7	-27.8	59.9	39.9

Per Capita Earnings in Manufacturing Industries

PER capita weekly earnings in October, 1932, for each of the 89 manufacturing industries surveyed by the Bureau of Labor Statistics, together with the per cents of change in October, 1932, as compared with September, 1932, and October, 1931, are shown in Table 2.

These earnings must not be confused with full-time weekly rates of wages. They are per capita weekly earnings, computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS¹ IN MANUFACTURING INDUSTRIES IN OCTOBER, 1932, AND COMPARISON WITH SEPTEMBER, 1932, AND OCTOBER, 1931

Industry	Per capita weekly earnings in October, 1932	Per cent of change compared with—	
		September, 1932	October, 1931
Food and kindred products:			
Slaughtering and meat packing.....	\$20.63	-0.8	-15.4
Confectionery.....	14.48	-2.7	-15.8
Ice cream.....	26.61	(¹)	-14.2
Flour.....	22.43	+4.8	-9.9
Baking.....	22.48	-1.0	-10.2
Sugar refining, cane.....	24.19	-6.1	-11.9
Beet sugar.....	16.50	-25.5	-19.4
Beverages.....	23.78	-5.5	-15.3
Butter.....	22.03	-1.1	-10.4
Textiles and their products:			
Cotton goods.....	11.09	+1.3	-12.5
Hosiery and knit goods.....	14.62	+6.6	-8.1
Silk goods.....	13.66	+2.6	-19.1
Woolen and worsted goods.....	16.34	-.3	-12.8
Carpets and rugs.....	16.80	+19.2	-13.0
Dyeing and finishing textiles.....	18.80	-4.1	-13.5
Clothing, men's.....	14.87	-1.5	-12.9
Shirts and collars.....	10.85	+9.0	-11.8
Clothing, women's.....	18.78	-.2	-19.2
Millinery.....	16.03	-16.9	-18.0
Corsets and allied garments.....	16.13	+15.2	-4.6
Cotton small wares.....	15.96	+4.5	-12.6
Hats, fur-felt.....	20.78	-9.1	+6.9
Men's furnishings.....	12.41	+5.4	-26.0
Iron and steel and their products, not including machinery:			
Iron and steel.....	13.19	+9.8	-27.8
Cast-iron pipe.....	12.24	-10.9	-29.9
Structural and ornamental ironwork.....	17.57	+2.4	-23.4
Hardware.....	13.23	+5.0	-27.4
Steam fittings and steam and hot-water heating apparatus.....	18.95	+10.0	-12.0
Stoves.....	19.76	+8.7	-11.8
Bolts, nuts, washers, and rivets.....	14.86	+11.5	-22.1
Cutlery (not including silver and plated cutlery) and edge tools.....	18.47	+10.6	-13.1
Forgings, iron and steel.....	14.44	+6.6	-29.8
Plumbers' supplies.....	16.34	+2.6	-29.4
Tin cans and other tinware.....	19.91	-4.3	-6.9
Tools (not including edge tools, machine tools, files, or saws).....	16.47	+6.1	-16.5
Wirework.....	17.74	+3.1	-17.5
Lumber and allied products:			
Lumber—			
Sawmills.....	11.71	+2.9	-26.9
Millwork.....	14.59	+8	-23.0
Furniture.....	14.95	+4.5	-21.1
Turpentine and rosin.....	13.83	-.1	-15.2
Leather and its manufactures:			
Leather.....	19.32	+3.3	-10.0
Boots and shoes.....	15.35	-1.5	+1.3
Paper and printing:			
Paper and pulp.....	18.65	+3.8	-15.9
Paper boxes.....	18.56	+2.5	-11.4
Printing—			
Book and job.....	27.12	+3	-12.5
Newspapers and periodicals.....	34.00	-.4	-12.3

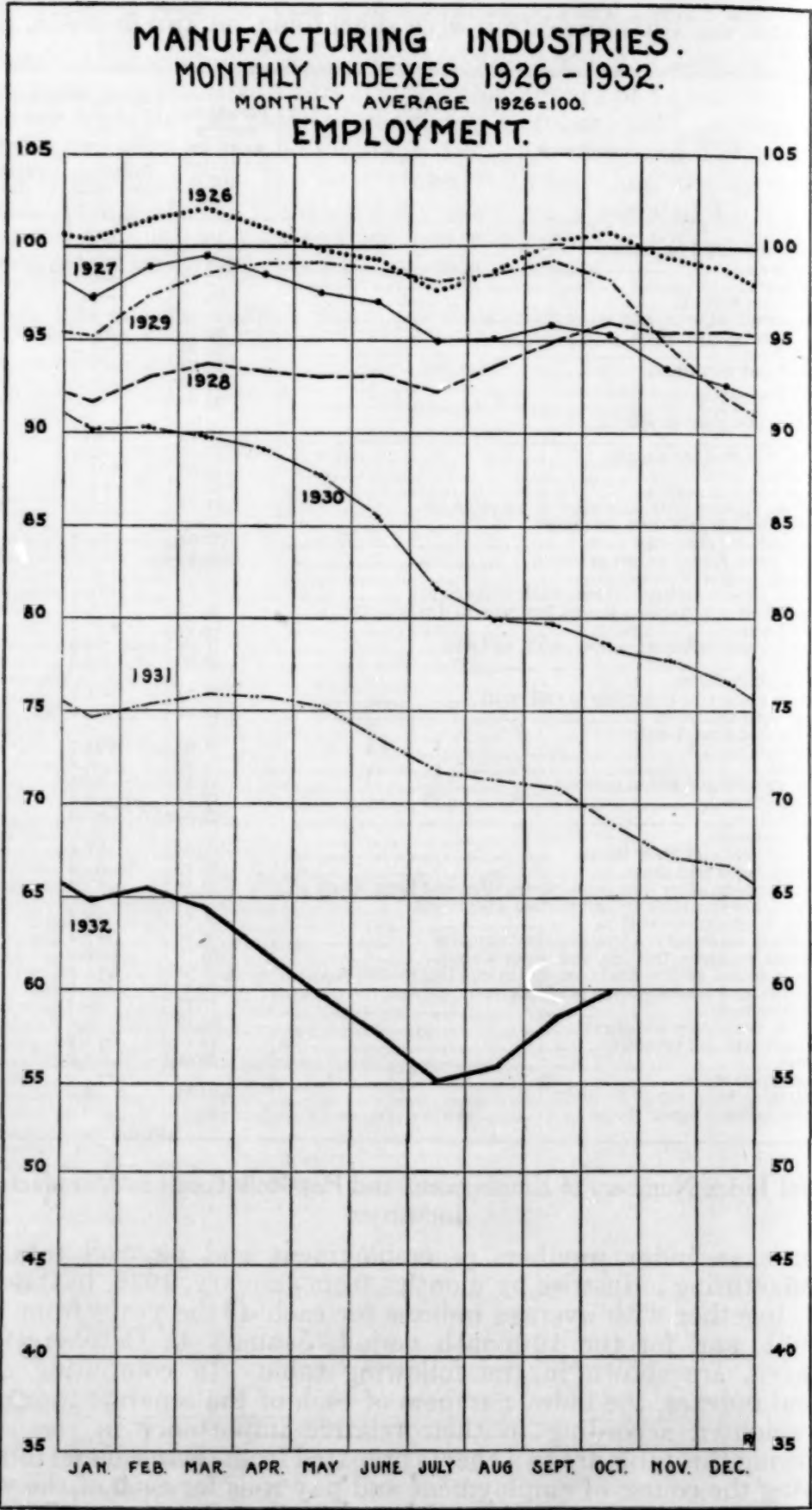
¹ Less than one-tenth of 1 per cent.

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN OCTOBER, 1932, AND COMPARISON WITH SEPTEMBER, 1932, AND OCTOBER, 1931—Continued

Industry	Per capita weekly earnings in October, 1932	Per cent of change compared with—	
		September, 1932	October, 1931
Chemicals and allied products:			
Chemicals.....	\$24.04	+2.5	-15.2
Fertilizers.....	12.44	-4.4	-21.0
Petroleum refining.....	29.95	-2.2	-13.0
Cottonseed oil, cake, and meal.....	10.47	-4.7	-30.3
Druggists' preparations.....	20.27	+5	-10.4
Explosives.....	19.99	+7.9	-21.6
Paints and varnishes.....	22.29	+3.7	-13.5
Rayon.....	17.29	+2	-14.9
Soap.....	22.98	-1.2	-13.2
Stone, clay, and glass products:			
Cement.....	17.59	+5	-26.1
Brick, tile, and terra cotta.....	12.05	-2.4	-29.3
Pottery.....	16.53	+14.2	-16.8
Glass.....	17.50	+2.9	-17.6
Marble, granite, slate, and other stone products.....	21.72	+1.3	-22.3
Nonferrous metals and their products:			
Stamped and enameled ware.....	17.04	+2.3	-15.9
Brass, bronze, and copper products.....	17.13	+5.5	-17.2
Aluminum manufactures.....	16.31	+14.3	-5.8
Clocks, time-recording devices, clock movements.....	15.84	+12.3	-13.7
Gas and electric fixtures, lamps, lanterns, and reflectors.....	20.32	-1.4	-15.9
Plated ware.....	21.20	+14.2	-16.2
Smelting and refining—copper, lead, and zinc.....	17.38	+2.6	-20.3
Jewelry.....	20.55	+8.2	-11.7
Tobacco manufactures:			
Chewing and smoking tobacco and snuff.....	13.72	-3.7	-11.0
Cigars and cigarettes.....	12.75	+1.0	-9.8
Transportation equipment:			
Automobiles.....	17.80	+24.7	-23.7
Aircraft.....	31.31	+8	+1.7
Cars, electric and steam railroad.....	18.10	+2.1	-9.6
Locomotives.....	19.72	+5.5	-21.6
Shipbuilding.....	22.66	+3.3	-15.5
Rubber products:			
Rubber tires and inner tubes.....	17.96	+7.6	-18.8
Rubber boots and shoes.....	17.49	+1.2	-7.2
Rubber goods, other than boots, shoes, tires, and inner tubes.....	19.44	+7.3	-10.6
Machinery, not including transportation equipment:			
Agricultural implements.....	15.91	+4.4	-1.3
Electrical machinery, apparatus, and supplies.....	19.80	+2.3	-19.5
Engines, turbines, tractors, and water wheels.....	20.18	+8.6	+8.7
Cash registers, adding machines, and calculating machines.....	23.74	+1.6	-7.8
Foundry and machine-shop products.....	16.09	+3.6	-22.3
Machine tools.....	17.79	-7	-21.4
Textile machinery and parts.....	17.54	+6	-16.8
Typewriters and supplies.....	14.30	+4.2	-24.5
Radio.....	19.19	-4.2	-17.6
Railroad repair shops:			
Electric-railroad repair shops.....	24.89	-2.3	-15.5
Steam-railroad repair shops.....	21.54	+3.9	-18.0

General Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

GENERAL index numbers of employment and pay-roll totals in manufacturing industries by months, from January, 1926, to October, 1932, together with average indexes for each of the years from 1926 to 1931, and for the 10-month period, January to October, 1932, inclusive, are shown in the following table. In computing these general indexes, the index numbers of each of the separate industries are weighted according to their relative importance in the total. Following this table are two charts prepared from these general indexes showing the course of employment and pay rolls for each of the years 1926 to 1931, inclusive, and for the months from January to October, 1932, inclusive.



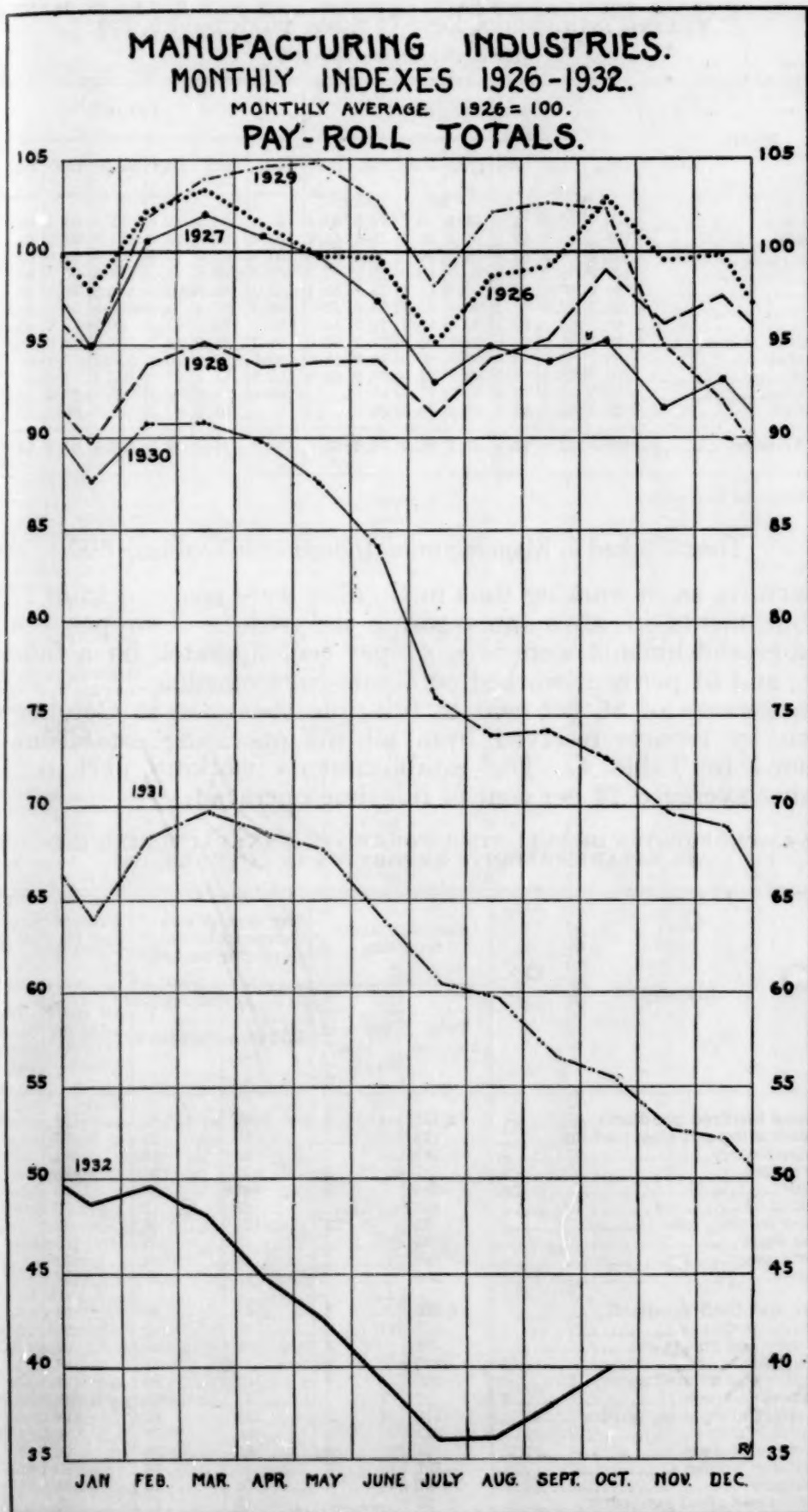


TABLE 3.—GENERAL INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES, JANUARY, 1926, TO OCTOBER, 1932
[12-month average, 1926=100]

Month	Employment							Pay rolls						
	1926	1927	1928	1929	1930	1931	1932	1926	1927	1928	1929	1930	1931	1932
January.....	100.4	97.3	91.6	95.2	90.7	74.6	64.8	98.0	94.9	89.6	95.5	88.1	63.7	48.6
February.....	101.5	99.0	93.0	97.4	90.9	75.3	65.6	102.2	100.6	93.9	101.8	91.3	68.1	49.6
March.....	102.0	99.5	93.7	98.6	90.5	75.9	64.5	103.4	102.0	95.2	103.9	91.6	69.6	48.2
April.....	101.0	98.6	93.3	99.1	89.9	75.7	62.2	101.5	100.8	93.8	104.6	90.7	68.5	44.7
May.....	99.8	97.6	93.0	99.2	88.6	75.2	59.7	99.8	99.8	94.1	104.8	88.6	67.7	42.5
June.....	99.3	97.0	93.1	98.8	86.5	73.4	57.5	99.7	97.4	94.2	102.8	85.2	63.8	39.3
July.....	97.7	95.0	92.2	98.2	82.7	71.7	55.2	95.2	93.0	91.2	98.2	77.0	60.3	36.2
August.....	98.7	95.1	93.6	98.6	81.0	71.2	56.0	98.7	95.0	94.2	102.1	75.0	59.7	36.3
September.....	100.3	95.8	95.0	99.3	80.9	70.9	58.5	99.3	94.1	95.4	102.6	75.4	56.7	38.1
October.....	100.7	95.3	95.9	98.4	79.9	68.9	59.9	102.9	95.2	99.0	102.4	74.0	55.3	39.9
November.....	99.5	93.5	95.4	95.0	77.9	67.1	---	99.6	91.6	96.1	95.4	69.6	52.5	---
December.....	98.9	92.6	95.5	92.3	76.6	66.7	---	99.8	93.2	97.7	92.4	68.8	52.2	---
Average.....	100.0	96.4	93.8	97.5	84.7	72.2	60.4	100.0	96.5	94.5	100.5	81.3	61.5	42.3

¹ Average for 10 months.

Time Worked in Manufacturing Industries in October, 1932

REPORTS as to working time in October were received from 13,629 establishments in 89 manufacturing industries. Two per cent of these establishments were idle, 47 per cent operated on a full-time basis, and 51 per cent worked on a part-time schedule.

An average of 86 per cent of full-time operation in October was shown by reports received from all the operating establishments included in Table 4. The establishments working part time in October averaged 73 per cent of full-time operation.

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN OCTOBER, 1932

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products.....	2,432	1	75	24	95	79
Slaughtering and meat packing.....	178	---	80	20	97	86
Confectionery.....	240	1	55	44	91	79
Ice cream.....	331	2	72	26	96	83
Flour.....	385	1	69	30	93	76
Baking.....	683	---	88	12	97	79
Sugar refining, cane.....	13	23	31	46	86	76
Beet sugar.....	53	---	92	8	100	83
Beverages.....	283	---	64	36	91	74
Butter.....	266	---	80	20	97	85
Textiles and their products.....	2,426	3	67	30	94	80
Cotton goods.....	657	3	65	31	93	78
Hosiery and knit goods.....	403	3	78	19	97	84
Silk goods.....	225	4	72	23	94	75
Woolen and worsted goods.....	230	4	67	29	94	78
Carpets and rugs.....	22	5	41	55	82	68
Dyeing and finishing textiles.....	140	2	58	40	94	83
Clothing, men's.....	233	2	68	30	96	86
Shirts and collars.....	71	6	65	30	94	81
Clothing, women's.....	151	7	66	26	93	77
Millinery.....	87	3	56	40	93	82
Corsets and allied garments.....	22	---	73	27	93	76
Cotton small wares.....	98	---	44	56	89	81
Hats, fur-felt.....	26	---	69	31	96	79
Men's furnishings.....	61	2	59	39	93	82

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN OCTOBER, 1932—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Iron and steel and their products, not including machinery	1,062	3	18	79	73	66
Iron and steel.....	160	8	8	84	72	69
Cast-iron pipe.....	39	5	8	87	54	50
Structural and ornamental ironwork.....	138	2	7	91	71	68
Hardware.....	53		13	87	70	65
Steam fittings and steam and hot-water heating apparatus.....	81	2	12	85	65	60
Stoves.....	117	3	26	71	80	72
Bolts, nuts, washers, and rivets.....	63		16	84	69	63
Cutlery (not including silver and plated cutlery) and edge tools.....	104	1	34	65	78	67
Forgings, iron and steel.....	40		15	85	62	56
Plumbers' supplies.....	53	6	17	77	75	69
Tin cans and other tinware.....	53	2	58	40	92	79
Tools (not including edge tools, machine tools, files, or saws).....	113	3	21	76	72	64
Wirework.....	48		19	81	76	71
Lumber and allied products	1,126	4	29	67	79	69
Lumber, sawmills.....	469	5	18	77	73	66
Lumber, millwork.....	288	3	25	72	78	71
Furniture.....	350	3	47	50	86	73
Turpentine and rosin.....	19		42	58	91	84
Leather and its manufactures	382	1	39	60	86	76
Leather.....	125	1	45	54	88	78
Boots and shoes.....	257	1	36	63	85	76
Paper and printing	1,547	1	45	58	87	77
Paper and pulp.....	317	3	33	64	82	72
Paper boxes.....	264		36	64	87	79
Printing, book and job.....	594		23	77	83	77
Printing, newspapers and periodicals.....	372		82	18	98	89
Chemicals and allied products	781	2	56	43	91	80
Chemicals.....	80	4	69	28	94	81
Fertilizers.....	145	1	65	34	94	82
Petroleum refining.....	68	9	68	24	96	86
Cottonseed oil, cake, and meal.....	42		64	36	97	93
Druggists' preparations.....	24		50	50	94	87
Explosives.....	15		20	80	65	57
Paints and varnishes.....	314	(1)	45	54	88	79
Rayon.....	14		57	43	93	83
Soap.....	79		63	37	93	82
Stone, clay, and glass products	729	12	36	52	80	66
Cement.....	72	13	79	8	97	64
Brick, tile, and terra cotta.....	245	24	19	57	69	59
Pottery.....	89	3	21	75	75	68
Glass.....	128	5	69	26	94	77
Marble, granite, slate, and other stone products.....	195	6	27	67	79	71
Nonferrous metals and their products	484	1	28	71	80	72
Stamped and enameled ware.....	78		23	77	79	72
Brass, bronze, and copper products.....	140	1	19	79	75	69
Aluminum manufactures.....	22		32	68	84	77
Clocks, time-recording devices, and clock movements.....	19	5	32	63	75	63
Gas and electric fixtures, lamps, lanterns, and reflectors.....	44		25	75	81	75
Plated ware.....	46		24	76	82	76
Smelting and refining—copper, lead, and zinc.....	18	6	44	50	84	70
Jewelry.....	117		41	59	84	72
Tobacco manufactures	291	4	23	73	79	73
Chewing and smoking tobacco and snuff.....	30		33	67	83	73
Cigars and cigarettes.....	171	5	21	74	79	73
Transportation equipment	288	5	34	61	81	71
Automobiles.....	151	5	21	74	73	65
Aircraft.....	26	4	62	35	93	82
Cars, electric and steam railroad.....	28	11	14	75	83	80
Locomotives.....	13		38	62	83	73
Shipbuilding.....	70	1	59	40	93	84

¹ Less than one-half of 1 per cent.

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN OCTOBER, 1932—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Rubber products	127	1	37	62	86	77
Rubber tires and inner tubes.....	30		20	80	77	71
Rubber boots and shoes.....	6		17	83	89	86
Rubber goods, other than boots, shoes, tires, and inner tubes.....	91	1	44	55	89	80
Machinery, not including transportation equipment	1,260	2	18	80	73	67
Agricultural implements.....	63	11	25	63	78	70
Electrical machinery, apparatus, and supplies.....	186	1	18	81	77	71
Engines, turbines, tractors, and water wheels.....	63		11	89	73	69
Cash registers, adding machines, and calculating machines.....	34	6	32	62	83	73
Foundry and machine-shop products.....	727	1	18	80	72	65
Machine tools.....	117	3	11	86	71	68
Textile machinery and parts.....	31		19	81	76	70
Typewriters and supplies.....	11		27	73	72	61
Radio.....	28		29	71	89	84
Railroad repair shops	784	(1)	47	53	90	81
Electric-railroad repair shops.....	361		66	34	95	84
Steam-railroad repair shops.....	423	(1)	31	68	86	79
Total, 89 industries	13,629	2	47	51	86	73

¹ Less than one-half of 1 per cent.

Employment in Nonmanufacturing Industries in October, 1932

IN THE following table are presented employment and pay-roll data for 14 groups of nonmanufacturing industries the totals of which also appear in the summary table of employment and pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN NONMANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1932, AND OCTOBER, 1931

Industrial group	Establishments reporting in both September and October, 1932	Employment			Pay rolls			Index numbers, October, 1932 (average 1929=100)	
		Number on pay roll, October, 1932	Per cent of change		Amount of pay roll (1 week) October, 1932	Per cent of change		Employment	Pay-roll totals
			September to October, 1932	October, 1931, to October, 1932		September to October, 1932	October, 1931, to October, 1932		
Anthracite mining.....	160	87,359	+14.4	-26.4	\$2,652,835	+42.0	-26.8	63.9	66.7
Bituminous coal mining.....	1,143	167,450	+7.4	-17.6	2,514,517	+25.1	-32.7	67.0	37.8
Metalliferous mining.....	287	21,230	+4.3	-43.3	404,721	+5.8	-51.9	30.5	18.0
Quarrying and nonmetallic mining.....	620	23,098	+1	-18.8	357,693	-1.3	-38.2	52.4	30.1
Crude petroleum producing.....	284	23,218	+1.2	-6.0	658,562	+1.3	-21.9	56.8	42.5
Telephone and telegraph.....	8,282	270,117	-1.5	-9.4	7,202,542	-2	-17.4	76.2	75.7
Power and light.....	3,528	214,057	-1.3	-13.8	6,247,291	-4	-20.2	79.9	74.4
Electric-railroad and motor-bus operation and maintenance.....	501	134,422	-1.7	-12.6	3,587,599	-1.6	-23.4	72.3	60.5
Wholesale trade.....	2,664	69,667	+9	-8.7	1,872,254	+1.2	-20.0	77.8	63.9
Retail trade.....	14,135	345,131	+4.5	-9.5	6,868,910	+3.9	-20.7	81.3	67.1
Hotels.....	2,557	135,846	-2.1	-13.7	1,851,301	-8	-26.5	75.4	58.6
Canning and preserving.....	939	56,898	-35.3	-25.0	650,293	-31.0	-33.2	81.1	51.8
Laundries.....	1,017	60,661	-1.4	-12.0	932,458	-2.7	-25.2	77.5	61.2
Dyeing and cleaning.....	382	12,096	-1.2	-12.6	218,519	-3.6	-27.8	82.3	58.8

Indexes of Employment and Pay-Roll Totals for Nonmanufacturing Industries

INDEX numbers of employment and pay-roll totals for 14 nonmanufacturing industries are presented in the following table. The index numbers show the variation in employment and pay rolls in these groups, by months, from January, 1929, to October, 1932, with the exception of the laundries and the dyeing and cleaning groups, for which information over the entire period is not available. The bureau recently secured data concerning employment and pay rolls for the index base year 1929 from establishments in the laundries and the dyeing and cleaning groups, and has computed index numbers for these two groups, which now appear in this tabulation. The monthly collection of trend-of-employment statistics in these two groups did not begin until the later months of 1930 and, therefore, indexes for each month of the entire period are not available.

TABLE 2.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO OCTOBER, 1932

[12-month average, 1929=100]

Month	Anthracite mining								Bituminous coal mining							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	105.7	102.1	90.6	76.2	100.7	105.8	89.3	61.5	106.4	102.5	93.9	80.8	106.1	101.4	73.3	47.0
February.....	106.0	106.9	89.5	71.2	122.1	121.5	101.9	57.3	107.7	102.4	91.5	77.4	116.6	102.1	68.3	47.0
March.....	98.0	82.6	82.0	73.7	90.8	78.5	71.3	61.2	106.8	98.6	88.8	75.2	108.6	86.4	65.2	46.8
April.....	100.7	84.1	85.2	70.1	88.3	75.0	75.2	72.0	100.2	94.4	85.9	65.5	89.2	81.7	58.6	33.9
May.....	103.7	93.8	80.3	66.9	99.0	98.8	76.1	58.0	96.6	90.4	82.4	62.6	91.9	77.5	54.4	30.7
June.....	92.9	90.8	76.1	53.0	80.7	94.3	66.7	37.4	94.7	88.4	78.4	60.5	90.0	75.6	52.4	27.3
July.....	83.2	91.6	65.1	44.5	64.7	84.0	53.7	34.5	94.1	88.0	76.4	58.6	85.6	68.9	50.4	24.4
August.....	91.1	80.2	67.3	49.2	78.4	78.8	56.4	41.4	95.7	89.2	77.0	59.4	92.8	71.1	50.6	26.4
September.....	101.9	93.8	80.0	55.8	103.8	91.6	64.9	47.0	97.2	90.5	80.4	62.4	98.6	74.9	53.6	30.2
October.....	106.1	99.0	86.8	63.9	133.9	117.2	91.1	66.7	98.8	91.8	81.3	67.0	106.8	79.4	56.2	37.8
November.....	104.0	97.2	83.5	-----	100.5	98.0	79.5	-----	101.0	92.5	81.1	-----	106.0	79.1	54.6	-----
December.....	107.1	99.1	79.8	-----	137.2	100.0	78.4	-----	101.4	92.5	81.2	-----	108.2	77.7	52.3	-----
Average.....	100.0	93.4	80.5	162.5	100.0	95.3	75.4	153.7	100.0	93.4	83.2	166.9	100.0	81.3	57.5	135.2
Month	Metalliferous mining								Quarrying and nonmetallic mining							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	93.1	95.7	68.3	49.3	88.0	92.7	55.0	29.7	91.6	79.6	64.4	48.9	85.9	71.9	50.4	30.2
February.....	94.6	92.3	65.3	46.9	91.8	92.5	54.6	27.8	91.9	79.8	66.6	47.4	88.9	73.5	54.4	29.6
March.....	97.0	90.9	63.5	45.0	99.1	90.8	52.8	26.5	96.0	83.0	70.0	46.0	95.0	80.0	58.2	28.7
April.....	100.6	89.3	63.9	43.3	104.6	88.3	51.4	25.0	99.6	87.4	76.1	48.6	100.5	85.4	62.6	30.0
May.....	100.8	87.5	62.4	38.3	104.6	85.6	49.3	23.8	104.1	90.8	75.0	50.6	107.1	90.2	62.3	32.3
June.....	103.8	84.6	60.0	32.2	105.6	81.6	46.1	20.1	106.6	90.3	72.3	49.5	110.5	90.9	60.1	30.0
July.....	101.5	80.5	56.2	29.5	99.0	71.9	41.3	16.9	104.7	89.9	71.0	49.5	104.7	85.5	57.3	29.1
August.....	103.2	79.0	55.8	28.6	100.1	71.0	40.2	16.5	106.7	89.3	68.9	51.1	110.3	85.8	55.1	29.7
September.....	102.1	78.1	55.5	29.3	102.0	69.9	40.0	17.0	106.6	87.7	66.6	52.4	109.8	82.5	51.2	30.5
October.....	101.9	77.2	53.8	30.5	103.1	68.6	37.4	18.0	103.6	84.7	64.5	52.4	105.8	79.3	48.7	30.1
November.....	103.0	72.8	52.8	-----	102.2	63.4	35.1	-----	98.6	78.3	59.3	-----	96.0	66.8	43.3	-----
December.....	98.5	70.1	51.2	-----	99.7	59.9	34.3	-----	90.1	70.2	53.9	-----	85.4	59.9	36.9	-----
Average.....	100.0	83.2	59.1	137.3	100.0	78.0	44.8	122.1	100.0	84.3	67.4	149.6	100.0	79.3	53.4	130.0
Month	Crude petroleum producing								Telephone and telegraph							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	90.0	92.7	74.8	54.9	93.1	94.0	71.5	46.5	94.3	101.6	90.5	83.0	94.5	105.1	96.3	89.1
February.....	90.4	90.8	73.2	54.4	99.0	88.6	70.0	46.9	95.3	100.2	89.2	82.0	93.0	101.9	94.8	89.6
March.....	89.6	89.3	72.2	51.4	97.4	91.3	73.2	43.2	96.5	99.4	88.6	81.7	98.7	105.8	97.9	88.2
April.....	97.6	86.8	69.8	54.9	96.7	86.6	66.3	44.5	97.8	98.9	88.1	81.2	98.3	103.4	95.0	83.4
May.....	93.9	89.8	67.8	54.5	92.4	85.4	64.7	47.1	100.4	99.7	87.4	80.6	99.4	103.2	94.1	82.8
June.....	104.1	90.2	65.0	54.2	99.4	87.1	62.7	44.8	101.5	99.8	86.9	79.9	100.0	103.4	95.0	82.1
July.....	106.0	89.9	65.3	55.4	100.7	88.5	59.2	44.6	102.6	100.0	86.6	79.1	104.1	106.6	93.3	79.6
August.....	113.2	87.7	62.4	57.4	104.7	86.0	56.3	42.9	103.7	98.8	85.9	78.1	101.8	102.5	92.3	79.1
September.....	108.9	85.0	61.2	56.2	110.7	84.0	55.2	41.9	102.5	96.8	85.0	77.4	100.4	102.2	92.1	75.9
October.....	107.9	85.2	60.4	56.8	100.1	82.6	54.4	42.5	101.9	94.5	84.1	76.2	105.1	100.9	91.6	75.7
November.....	101.1	83.6	57.6	-----	103.8	80.0	52.0	-----	101.9	93.0	83.5	-----	101.2	97.9	89.7	-----
December.....	97.0	77.4	58.2	-----	102.1	77.2	54.9	-----	101.8	91.6	83.1	-----	103.9	101.3	92.7	-----
Average.....	100.0	87.4	65.7	155.0	100.0	85.9	61.7	144.5	100.0	97.9	86.6	179.9	100.0	102.9	93.7	182.6

¹ Average for 10 months.

TABLE 2.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO OCTOBER, 1932—Continued

[12-month average, 1929=100]

Month	Power and light								Electric-railroad and motor-bus operation and maintenance ¹							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	92.9	99.6	99.2	89.3	91.7	99.7	98.6	88.4	99.7	97.1	86.9	79.5	98.7	97.8	85.6	74.3
February.....	92.6	98.8	97.8	87.2	91.8	100.4	99.7	86.0	99.1	95.1	86.6	78.9	97.6	95.7	87.1	73.6
March.....	92.8	99.7	96.7	85.5	94.5	102.1	102.4	85.4	97.0	94.4	86.4	77.6	98.0	95.4	88.1	72.4
April.....	95.9	100.7	97.1	84.8	95.5	102.6	97.6	82.4	98.5	95.2	86.8	78.0	99.5	97.1	86.6	70.7
May.....	98.4	103.4	97.6	84.0	98.1	104.5	98.7	84.2	100.4	95.2	85.9	76.9	101.0	96.0	85.1	71.2
June.....	100.7	104.6	97.2	83.2	100.4	107.8	98.3	80.5	101.2	94.8	85.3	76.5	101.7	97.0	84.8	69.2
July.....	103.2	105.9	96.7	82.3	102.3	106.7	97.4	78.7	102.2	95.3	85.6	75.6	101.9	95.6	83.3	65.3
August.....	105.4	106.4	95.9	81.5	103.8	106.6	96.2	76.7	102.2	92.9	84.8	74.1	102.0	92.1	81.9	62.8
September.....	105.5	105.2	94.7	81.0	106.6	106.1	94.3	74.7	101.4	91.8	84.0	73.5	101.5	90.5	81.2	61.5
October.....	105.7	104.8	92.7	79.9	106.0	105.6	93.2	74.4	100.5	91.0	82.7	72.3	100.0	88.9	79.0	60.5
November.....	104.7	103.4	91.3	-----	104.1	103.7	93.3	-----	99.4	89.3	81.5	-----	98.4	87.7	79.7	-----
December.....	102.5	103.2	90.3	-----	105.8	106.3	91.2	-----	98.3	88.8	79.9	-----	99.8	88.6	77.8	-----
Average.....	100.0	103.0	95.6	¹ 83.9	100.0	104.3	96.7	¹ 81.1	100.0	93.4	84.7	¹ 76.3	100.0	93.5	83.4	¹ 68.2
Month	Wholesale trade								Retail trade							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	97.7	100.0	89.5	81.8	96.7	100.0	87.5	74.1	99.2	98.9	90.0	84.3	99.0	99.7	89.4	78.0
February.....	96.9	98.5	88.2	80.9	96.4	98.3	88.4	72.5	94.6	94.4	87.1	80.5	94.5	96.0	86.7	73.7
March.....	97.3	97.7	87.4	79.8	98.5	99.7	89.1	71.3	96.2	93.9	87.8	81.4	96.1	95.5	87.5	73.4
April.....	97.9	97.3	87.4	78.9	97.8	97.9	85.2	68.9	95.5	97.3	90.1	81.6	96.0	97.5	88.3	72.7
May.....	99.0	96.8	87.1	77.9	99.0	97.4	84.7	69.7	97.3	96.7	89.9	80.9	97.1	97.3	88.0	71.1
June.....	99.2	96.5	87.1	77.0	98.6	98.6	84.1	66.2	97.4	93.9	89.1	79.4	98.6	96.8	87.6	68.2
July.....	100.4	96.0	86.8	76.6	100.5	96.0	83.3	64.7	93.6	89.0	83.9	74.6	95.9	91.7	83.3	63.3
August.....	101.3	95.0	86.5	76.4	100.0	93.6	82.1	63.2	93.6	85.6	81.8	72.6	95.2	87.6	80.3	60.7
September.....	101.9	94.8	86.1	77.1	103.3	93.6	81.4	63.1	97.6	92.0	86.6	77.8	99.2	92.4	83.5	64.6
October.....	102.9	94.2	85.2	77.8	102.7	92.9	79.9	63.9	101.7	95.5	89.8	81.3	102.6	95.1	84.6	67.1
November.....	102.9	92.6	84.1	-----	101.9	91.0	79.7	-----	106.7	98.4	90.9	-----	105.2	96.8	85.4	-----
December.....	102.6	92.0	83.7	-----	104.7	91.3	77.8	-----	126.2	115.1	106.2	-----	120.6	107.7	94.1	-----
Average.....	100.0	96.0	86.6	¹ 78.4	100.0	95.9	83.6	¹ 67.8	100.0	95.9	89.4	¹ 79.4	100.0	96.2	86.6	¹ 69.3
Month	Hotels								Canning and preserving							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	97.1	100.4	95.0	83.2	98.5	100.3	91.0	73.9	50.8	46.1	48.9	35.0	57.3	50.3	46.1	31.8
February.....	99.8	102.4	96.8	84.3	102.0	103.8	93.7	73.9	48.9	45.7	48.3	37.1	59.2	51.5	48.6	32.7
March.....	100.9	102.4	96.8	84.0	103.4	104.4	93.4	72.4	49.4	49.7	53.0	36.3	54.9	50.8	50.3	31.9
April.....	99.7	100.1	95.9	82.7	100.6	100.3	89.9	69.6	90.6	74.8	59.6	47.0	98.9	72.6	57.1	37.9
May.....	98.1	98.0	92.5	80.1	98.9	98.4	87.7	67.0	62.0	65.7	56.0	40.5	71.2	66.9	56.0	36.0
June.....	99.3	98.0	91.6	78.0	98.7	98.1	85.4	63.8	76.6	83.0	70.6	55.5	71.9	81.5	58.6	40.5
July.....	101.1	101.3	93.3	78.4	99.8	99.8	85.2	61.8	126.8	126.3	102.2	73.0	109.2	112.7	74.2	47.5
August.....	102.6	101.5	92.8	77.6	99.4	98.6	83.8	59.6	184.8	185.7	142.9	99.0	180.1	172.0	104.7	65.6
September.....	102.8	100.1	90.6	77.0	100.2	97.1	81.9	59.1	210.1	246.6	180.1	125.3	207.9	214.8	129.4	75.1
October.....	100.6	97.5	87.4	75.4	100.2	95.5	79.7	58.6	143.3	164.7	108.1	81.1	134.5	140.0	77.6	51.8
November.....	100.0	95.2	84.9	-----	99.8	93.6	77.1	-----	95.1	96.7	60.8	-----	91.6	82.9	48.1	-----
December.....	97.7	93.5	83.1	-----	98.9	91.5	75.4	-----	61.3	61.6	40.7	-----	63.4	57.4	36.9	-----
Average.....	100.0	99.2	91.7	¹ 80.1	100.0	98.5	85.4	¹ 66.0	100.0	103.9	80.9	¹ 63.0	100.0	96.1	65.6	¹ 45.1
Month	Laundries								Dyeing and cleaning							
	Employment				Pay rolls				Employment				Pay rolls			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	-----	-----	90.5	84.7	-----	-----	86.6	76.4	-----	-----	88.9	82.1	-----	-----	77.7	65.8
February.....	-----	-----	90.0	82.9	-----	-----	85.6	73.3	-----	-----	87.4	80.5	-----	-----	75.1	62.2
March.....	-----	-----	89.5	82.0	-----	-----	85.6	71.6	-----	-----	88.0	80.6	-----	-----	75.6	61.7
April.....	-----	-----	90.5	82.0	-----	-----	86.8	71.4	-----	-----	95.7	83.3	-----	-----	86.3	65.9
May.....	-----	-----	90.3	81.4	-----	-----	86.5	70.6	-----	-----	96.7	84.5	-----	-----	86.6	67.3
June.....	-----	-----	91.0	81.0	-----	-----	87.1	68.6	-----	-----	99.0	85.1	-----	-----	89.1	65.8
July.....	-----	-----	91.8	80.3	-----	-----	87.4	66.3	-----	-----	98.6	82.4	-----	-----	86.2	60.0
August.....	-----	-----	90.2	78.9	-----	-----	84.6	63.9	-----	-----	93.5	79.5	-----	-----	80.0	56.3
September.....	-----	-----	89.3	78.6	-----	-----	84.1	62.9	-----	-----	95.3	83.3	-----	-----	82.6	61.0
October.....	-----	-----	88.1	77.5	-----	-----	81.8	61.2	-----	-----	94.2	82.3	-----	-----	81.4	58.8
November.....	-----	-----	86.2	-----	-----	-----	78.9	-----	-----	-----	90.1	-----	-----	-----	74.7	-----
December.....	-----	-----	85.3	-----	-----	-----	77.4	-----	-----	-----	84.9	-----	-----	-----	67.9	-----
Average.....	100.0	-----	89.4	¹ 80.9	100.0	-----	84.4	¹ 68.6	100.0	-----	92.7	¹ 82.4	100.0	-----	80.3	¹ 62.5

¹ Average for 10 months.² Not including electric-railroad car building and repairing; see transportation equipment and railroad repair-shop groups, manufacturing industries, Table 1.

Trend of Employment in October, 1932, by States

IN THE following table are shown the fluctuations in employment and pay-roll totals in October, as compared with September, 1932, in certain industrial groups by States. These tabulations have been prepared from data secured directly from reporting establishments and from information supplied by cooperating State agencies. The combined total of all groups does not include building-construction data, information concerning which is published elsewhere in a separate tabulation by city and State totals. In addition to the combined total of all groups, the trend of employment and pay rolls in the manufacturing, public utility, hotel, wholesale trade, retail trade, bituminous coal mining, crude petroleum producing, quarrying and nonmetallic mining, metalliferous mining, laundries, and dyeing and cleaning groups is presented. In this State compilation, the totals of the telephone and telegraph, power and light, and electric-railroad operation groups have been combined and are presented as one group—public utilities. Due to the extreme seasonal fluctuations in the canning and preserving industry, and the fact that during certain months the activity in this industry in a number of States is negligible, data for this industry are not presented separately. The number of employees and the amount of weekly pay roll in September and October as reported by identical establishments in this industry are included, however, in the combined total of "All groups."

The per cents of change shown in the accompanying tables, unless otherwise noted, are unweighted per cents of change; that is, the industries included in the groups and the groups comprising the total of all groups, have not been weighted according to their relative importance in the combined totals.

As the anthracite mining industry is confined entirely to the State of Pennsylvania, the changes reported in this industry in the summary table are the fluctuations in this industry by State total.

When the identity of any reporting company would be disclosed by the publication of a State total for any industrial group, figures for the group do not appear in the separate industrial-group tabulation but are included in the State totals for "All groups." Data are not presented for any industrial group when the representation in the State covers less than three establishments.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	473	48,795	+3.9	\$539,908	+5.3	211	34,013	+4.0	\$367,795	+4.3
Arkansas.....	¹ 449	14,802	+2.2	217,412	+4.5	182	9,869	+1.0	129,230	+5.6
Arizona.....	362	7,928	+8.7	164,652	+9.6	61	2,004	+18.6	43,432	+17.9
California.....	² 1,979	252,674	-2.9	6,039,503	-4	1,164	135,769	-4.9	3,062,671	-8
Colorado.....	741	33,229	+17.7	651,787	+14.9	118	14,229	+50.5	249,819	+34.5
Connecticut.....	1,078	132,933	+4.5	2,483,979	+7.2	661	113,228	+5.2	1,987,130	+9.6
Delaware.....	127	8,903	-8.5	177,283	-4.9	51	6,053	-1.0	125,122	+1.4
District of Columbia.....	² 367	36,801	+2.5	825,964	+2.6	55	4,071	+9	135,819	-1.0
Florida.....	473	22,399	+4.3	380,889	+10.6	137	14,679	+5.6	211,430	+18.8
Georgia.....	639	72,593	+3.8	897,902	+3.4	311	59,220	+4.7	626,974	+3.5
Idaho.....	201	7,817	+5.6	146,029	+5.8	42	4,525	+10.7	79,906	+11.1
Illinois.....	³ 1,451	267,154	+1.2	5,554,462	+1.3	963	161,744	-2	2,955,031	+8
Indiana.....	1,236	112,828	-1.0	2,000,943	+3.6	588	80,542	+2.7	1,398,449	+5.0
Iowa.....	1,180	44,401	+6	848,767	+3.8	472	24,378	+2.7	442,543	+2.8
Kansas.....	⁴ 1,060	63,277	+1.9	1,417,992	-6	441	24,504	+1.8	514,844	+1.0
Kentucky.....	797	57,232	+2.0	909,553	+6.6	210	20,755	+3.6	330,599	+4.4
Louisiana.....	498	29,926	+2.7	434,629	+9	217	17,942	+4.2	237,502	+1.2
Maine.....	580	41,314	+1.1	692,176	+1.1	188	32,952	+4.5	533,318	+3.7
Maryland.....	⁵ 808	74,450	+1.4	1,418,566	+1.7	417	48,553	+3.0	856,667	+4.3
Massachusetts.....	⁶ 7,765	346,636	+2.4	7,224,107	+5	1,113	166,786	+4.1	2,931,087	+2.6
Michigan.....	1,495	217,455	-8.6	4,142,979	+6.9	391	136,721	-10.1	2,434,600	+10.3
Minnesota.....	1,004	61,881	-1.9	1,298,338	+1.6	275	31,513	+4.6	641,500	+7.3
Mississippi.....	392	9,039	-7	111,302	-6	78	5,352	-8	55,954	-2
Missouri.....	1,123	101,893	+1.1	2,071,708	+2.5	523	58,094	+1.8	1,083,352	+2.6
Montana.....	325	8,992	+13.1	214,931	+13.6	49	3,425	+50.5	64,507	+36.0
Nebraska.....	706	23,893	+8.2	496,706	+6.0	128	12,829	+17.2	256,504	+9.7
Nevada.....	133	1,391	-2.3	37,271	-3.6	23	274	-7.1	7,949	-6.3
New Hampshire.....	463	34,593	-3.9	544,059	-7.5	184	30,359	-2.0	449,433	-7.2
New Jersey.....	1,462	175,884	-1.2	3,904,856	-2	⁷ 700	161,847	+4	3,474,610	+1.2
New Mexico.....	172	4,182	-2.8	75,939	+4.5	21	241	-9.1	4,921	-5
New York.....	3,555	474,127	+1.4	11,179,709	+1.3	⁸ 1,663	312,750	+3.0	7,053,213	+3.2
North Carolina.....	896	112,329	+5.6	1,332,098	+6.6	558	107,690	+5.9	1,261,211	+7.1
North Dakota.....	315	3,611	-2.1	80,163	-6	62	1,211	-5.2	29,157	-3.0
Ohio.....	4,758	343,048	+1	6,385,072	+4.2	1,953	244,772	-4	4,376,852	+4.5
Oklahoma.....	710	25,418	-3	532,076	+3	125	8,587	-2.8	171,406	-4.3
Oregon.....	697	27,873	-3.4	530,440	+1.5	134	14,045	+4.7	243,660	+9.0
Pennsylvania.....	4,093	594,730	+3.8	11,151,532	+12.5	1,747	329,180	+2.9	5,046,186	+7.0
Rhode Island.....	912	57,050	+6.5	1,066,994	+7.0	273	45,873	+8.1	807,690	+9.2
South Carolina.....	326	48,526	+4.1	477,177	+8.2	178	45,219	+4.8	424,098	+9.2
South Dakota.....	229	5,553	+1.5	125,304	-8	47	2,077	+3.8	35,447	-3.9
Tennessee.....	739	61,177	+3.4	839,881	+5.4	278	45,265	+5.1	594,786	+6.7
Texas.....	788	59,632	+6	1,287,464	-9	388	32,615	+1.9	621,831	-2.2
Utah.....	326	13,727	+7.3	256,467	+13.2	83	4,883	+33.9	88,583	+22.3
Vermont.....	368	9,428	-4.3	181,591	-8	121	5,015	-3.1	94,062	-5
Virginia.....	1,279	81,566	+2.3	1,300,942	+5.0	434	56,399	+3.5	873,079	+4.9
Washington.....	1,126	51,799	+2	1,015,722	+1.8	269	23,664	+3.0	438,513	+5.5
West Virginia.....	729	77,638	+3.2	1,295,941	+12.1	185	31,387	+6.8	554,549	+14.2
Wisconsin.....	⁹ 1,086	122,203	-3	2,106,283	+4.7	809	93,642	-2.4	1,500,377	+4.9
Wyoming.....	186	6,357	+7.1	163,621	+14.8	29	1,788	+36.6	44,240	+13.3

¹ Includes auto dealers and garages, and sand, gravel, and building construction.² Includes banks, insurance, and office employment.³ Includes building and contracting.⁴ Includes transportation, financial institutions, restaurants, and building construction.⁵ Weighted per cent of change.⁶ Includes construction, municipal, agricultural, and office employment, amusement and recreation, professional and transportation services.⁷ Includes laundries.⁸ Includes laundering and cleaning.⁹ Includes construction, but does not include hotels and restaurants.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Wholesale trade					Retail trade				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	15	558	+1.3	\$13,891	+10.0	31	2,335	+10.6	\$32,936	+5.5
Arkansas.....	17	450	+6	12,426	+1.0	138	1,708	+5.4	31,078	+6.3
Arizona.....	21	189	+3.8	4,935	+3.1	174	1,393	+4.9	22,889	+7.8
California.....	78	5,640	-4	166,513	+2	111	26,924	+2.8	535,462	+1.7
Colorado.....	28	788	-1.3	22,311	+8	273	4,061	-8	89,014	+2.0
Connecticut.....	61	1,266	+6	36,384	+1.8	125	5,408	+4.9	105,144	-9
Delaware.....	9	165	+6	4,721	+2.2	10	170	+10.4	2,326	-6.7
District of Columbia.....	29	402	-2	13,036	+1.0	403	11,552	+11.4	236,942	+6.2
Florida.....	42	634	+1.6	21,499	+3.6	37	930	+7.5	17,562	+8.6
Georgia.....	32	406	(10)	11,263	-1	15	1,883	+6.1	30,015	+2.9
Idaho.....	7	114	+9	3,215	+3.6	68	610	+2.0	11,554	+1.0
Illinois.....	12	805	-3.2	20,457	-2.2	63	17,294	+1.3	404,323	+2.0
Indiana.....	63	1,214	-3	32,079	+1.6	195	6,344	+2.8	110,191	+1.5
Iowa.....	35	1,034	-1.0	27,108	-7	126	3,356	+6.6	57,240	+4.1
Kansas.....	70	1,977	+8	50,249	+1.2	332	6,293	+2.6	113,718	+7.8
Kentucky.....	23	576	+6.3	10,871	-4	31	1,632	+7.7	25,771	+7.3
Louisiana.....	25	690	(10)	14,861	+1.4	54	3,189	+6.1	47,920	+5.5
Maine.....	17	428	-10.3	10,521	-2.4	79	1,167	+3.2	20,765	+1.8
Maryland.....	32	731	-3	16,364	-4	35	5,377	+9.3	92,012	+15.1
Massachusetts.....	659	14,276	+5	377,508	-1.9	3,952	68,216	+4.3	1,185,697	+1.2
Michigan.....	64	1,807	-1	53,365	+3.3	218	10,781	-2.9	204,822	-3.9
Minnesota.....	62	3,847	+5	107,302	+4	284	7,684	-2.2	135,236	+3
Mississippi.....	5	116	-9	2,359	+1.0	60	439	+7.9	4,570	+3.4
Missouri.....	59	5,206	+2.0	130,391	+3.2	135	6,118	+4.5	124,369	+1.8
Montana.....	13	218	+2.3	6,427	+4.0	82	810	-1.2	18,024	+2
Nebraska.....	35	907	-8	25,735	+2.5	194	1,771	+2.9	34,241	+2.9
Nevada.....	8	101	+9.8	3,599	+5.9	30	257	+8	6,932	-4
New Hampshire.....	17	193	-2.0	5,042	-2.3	65	674	+6.3	11,886	+5.0
New Jersey.....	26	488	+3.2	15,243	+4.9	428	7,938	+3.6	175,968	+4.2
New Mexico.....	6	48	-14.3	1,505	-5.2	48	278	+4.1	5,859	+4.8
New York.....	151	3,914	-6	125,701	-9	507	45,042	+4.8	1,009,112	+3.7
North Carolina.....	17	215	-4.9	5,458	+3.5	173	588	+12.4	10,719	+4.1
North Dakota.....	17	242	-2.4	7,094	-2	38	437	+12.6	6,880	+2.4
Ohio.....	245	4,951	+1.2	129,619	+6	1,565	31,616	+4.7	602,734	+5.6
Oklahoma.....	55	821	+9	21,418	+4.8	110	1,979	+2.4	35,804	+8.9
Oregon.....	54	1,323	-1.6	35,981	-2.7	223	2,215	+7	45,276	+5.9
Pennsylvania.....	130	3,201	+2	87,108	+2.2	344	26,371	+9.9	512,937	+12.3
Rhode Island.....	42	1,035	+3.5	25,749	+9	512	4,846	+3.6	103,621	+2.5
South Carolina.....	16	248	+4.6	5,238	+2.9	16	484	+7.8	4,395	+2.3
South Dakota.....	10	127	-8	3,838	+9	15	158	+2.6	2,375	-7.0
Tennessee.....	37	698	+1.3	15,005	+1.3	58	3,613	+8.6	58,026	+7.2
Texas.....	135	2,532	+3.8	67,462	+1.5	74	6,948	+4.7	126,444	+5.1
Utah.....	15	470	-3.9	11,279	-2	82	733	+3.1	14,764	+5.1
Vermont.....	5	112	-7.4	2,933	-1.6	45	532	+5.1	8,702	+7.5
Virginia.....	46	918	+4.6	23,152	+6.8	479	4,877	+4.2	88,344	+5.4
Washington.....	89	2,220	-1	60,608	+3	411	6,645	+10.1	123,158	+5.5
West Virginia.....	34	569	+1.2	15,765	+4.1	51	974	+5.4	16,664	+6.0
Wisconsin.....	46	2,090	+3.3	48,799	+6.9	54	7,667	+6.0	120,051	+4.1
Wyoming.....	8	58	+3.6	1,771	+1.3	46	241	+3.4	6,117	+2.3

* No change.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Quarrying and nonmetallic mining					Metalliferous mining				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	7	553	+5.1	\$6,062	+12.1	8	886	+28.6	\$10,415	+206.4
Arkansas.....	9	294	+131.5	2,832	+92.1					
Arizona.....						15	2,350	+11.0	50,184	+15.7
California.....	30	546	+4.4	11,333	+19.8	<i>24</i>	<i>1,522</i>	<i>-1.3</i>	<i>40,978</i>	<i>+3.4</i>
Colorado.....						14	641	- .6	16,565	+2.8
Connecticut.....	10	152	-22.1	3,147	+8.1					
Delaware.....										
District of Columbia.....										
Florida.....	8	519	-12.9	5,642	-13.5					
Georgia.....	19	1,168	-2.2	13,039	+8.1					
Idaho.....						10	1,578	- .8	33,622	+ .5
Illinois.....	20	517	-3.4	9,464	-11.1					
Indiana.....	36	860	-4.6	13,481	-3.1					
Iowa.....	18	445	-2.0	8,328	-8.7					
Kansas.....	<i>21</i>	<i>974</i>	<i>- .6</i>	<i>21,874</i>	<i>-1.1</i>	<i>13</i>	<i>450</i>	<i>+75.1</i>	<i>7,748</i>	<i>+134.9</i>
Kentucky.....	22	1,172	+16.7	9,225	-3.8					
Louisiana.....	4	537	-1.1	5,488	+3.7					
Maine.....	8	396	-6.8	9,563	-2.7					
Maryland.....	16	379	-6.7	4,254	+ .8					
Massachusetts.....										
Michigan.....	21	1,186	+7.3	16,468	+6.7	44	4,018	-4.8	45,074	-(¹¹)
Minnesota.....	7	164	-10.4	2,842	-20.0	33	1,261	+99.8	16,268	+75.3
Mississippi.....	3	25	+108.3	151	+75.6					
Missouri.....	12	334	+15.2	4,242	+13.4	12	1,030	- .9	19,784	+7.2
Montana.....	3	14	+7.7	186	-1.1	17	1,193	+ .1	34,341	+2.8
Nebraska.....	3	100	(¹⁰)	1,331	+7.8					
Nevada.....						15	130	-14.5	3,612	-18.0
New Hampshire.....	8	153	-15.0	4,219	-22.0					
New Jersey.....	3	20	-13.0	449	-9.8					
New Mexico.....						5	821	-3.2	14,911	-7.4
New York.....	44	2,022	-5.9	37,793	-14.1					
North Carolina.....	4	82	+49.1	1,005	+24.7					
North Dakota.....										
Ohio.....	65	2,035	+5.7	34,673	+8.4					
Oklahoma.....	4	64	+1.6	933	+17.5	31	999	+18.4	14,763	+7.9
Oregon.....						6	59	-16.9	985	-13.7
Pennsylvania.....	59	2,616	+ .4	32,244	+4.1					
Rhode Island.....										
South Carolina.....	8	144	-6.5	836	+62.6					
South Dakota.....	5	68	-4.2	1,316	+7.7					
Tennessee.....	20	763	-2.1	7,144	-10.1	4	187	+2.2	2,225	-12.8
Texas.....	<i>12</i>	<i>285</i>	<i>-26.7</i>	<i>6,383</i>	<i>-31.8</i>					
Utah.....						10	2,021	-1.2	38,089	+2.9
Vermont.....	39	2,146	-1.2	44,447	+2.0					
Virginia.....	15	959	-1.9	8,470	-6.7					
Washington.....	8	207	+4.5	5,687	+11.1					
West Virginia.....	6	258	+2.0	2,979	+16.3					
Wisconsin.....	<i>13</i>	<i>137</i>	<i>+22.3</i>	<i>1,908</i>	<i>+71.1</i>					
Wyoming.....										

¹⁰ No change.¹¹ Less than one-tenth of 1 per cent.

TREND OF EMPLOYMENT

1437

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Bituminous coal mining					Crude petroleum producing				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	39	6,674	+0.2	\$52,100	+2.0	8	361	+18.4	\$8,866	+15.4
Arkansas.....	5	88	(¹⁰)	1,640	(¹⁰)					
Arizona.....										
California.....						39	5,268	+6	157,177	-3.5
Colorado.....	40	4,741	+12.1	88,312	+32.2					
Connecticut.....										
Delaware.....										
District of Columbia.....										
Florida.....										
Georgia.....										
Idaho.....										
Illinois.....	29	5,533	+203.5	131,855	+315.2	10	206	(¹⁰)	4,424	-1.4
Indiana.....	46	5,656	+68.2	124,525	+77.8	5	33	-2.9	629	+1.5
Iowa.....	19	2,233	+13.9	54,330	+47.9					
Kansas.....	23	1,707	+156.3	26,291	+176.8	36	1,597	+2.4	38,863	+1.1
Kentucky.....	133	22,669	+9	331,258	+14.8	6	211	+8.8	4,010	+13.6
Louisiana.....						9	184	-8.9	4,906	-11.8
Maine.....										
Maryland.....	14	1,440	-7	12,374	+18.2					
Massachusetts.....										
Michigan.....										
Minnesota.....										
Mississippi.....										
Missouri.....	17	1,289	+8.2	26,268	+42.2					
Montana.....	10	830	+8.1	26,102	+34.6	5	41	-19.6	1,056	-14.4
Nebraska.....										
Nevada.....										
New Hampshire.....										
New Jersey.....										
New Mexico.....	12	1,675	-3	28,641	+19.8	4	28	(¹⁰)	880	(¹⁰)
New York.....						5	110	-2.7	2,975	-1.3
North Carolina.....										
North Dakota.....										
Ohio.....	59	7,979	+34.0	133,978	+47.0	6	42	-16.0	690	-17.9
Oklahoma.....	17	539	+11.6	11,083	+19.4	67	4,755	+3.7	122,272	+3.1
Oregon.....										
Pennsylvania.....	347	50,561	+1.1	629,206	+12.7	21	557	+9.0	12,666	+9
Rhode Island.....										
South Carolina.....										
South Dakota.....										
Tennessee.....	14	2,302	+3	24,071	+25.8					
Texas.....						3	7,012	-6.9	238,639	+2
Utah.....	14	1,712	+12.5	40,498	+40.5					
Vermont.....										
Virginia.....	33	8,402	-1	125,478	+15.5					
Washington.....	10	1,353	+8.2	25,645	-1					
West Virginia.....	238	35,798	+8	513,509	+14.4	8	385	+2.7	8,315	+7.3
Wisconsin.....										
Wyoming.....	30	3,466	+1.0	93,318	+21.8	6	69	-10.4	2,360	-1.1

¹⁰ No change.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Public utilities					Hotels				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	123	1,924	-0.8	\$40,519	-0.4	28	1,091	+3.8	\$9,095	+4.6
Arkansas.....	49	1,134	-.2	26,814	-3.2	17	741	-1.9	7,465	-2.9
Arizona.....	67	1,252	-1.4	31,931	+1.1	12	314	+6.8	4,770	+8.3
California.....	42	47,613	-1.2	1,321,681	+2.2	207	9,089	-3.8	146,199	-4.2
Colorado.....	196	5,515	-.2	140,450	+2.2	34	1,201	-3.4	19,051	-2.4
Connecticut.....	145	9,978	-.6	307,624	-1.9	35	1,205	+1.6	15,651	+1.3
Delaware.....	28	1,122	-2.1	32,249	-3.9	7	245	-1.6	2,972	+3.2
District of Columbia.....	22	8,374	+3.3	241,879	+2.9	55	4,110	+16.6	56,955	+11.5
Florida.....	185	4,195	-.7	110,503	+1.2	36	760	+7.5	8,288	+6.9
Georgia.....	186	6,815	-.1	190,582	+3.9	33	1,242	-3.4	10,402	-2.3
Idaho.....	55	652	-2.2	13,366	+1.2	16	266	+7.3	3,513	+2.5
Illinois.....	65	66,341	-1.0	1,767,387	-3.0	12 61	10,034	-.7	156,781	-3.7
Indiana.....	149	9,988	-1.7	236,526	+2.2	59	2,758	+2.2	31,260	+6.1
Iowa.....	431	9,976	-2.1	227,333	+1.6	52	2,250	+6.5	22,212	+4.9
Kansas.....	24	6,305	+1.7	150,198	-.9	34	712	+1.6	7,749	+2.4
Kentucky.....	304	7,062	-.5	162,735	-1.3	36	1,607	+1.6	17,535	+6.4
Louisiana.....	152	4,301	-.8	98,849	-.8	23	1,852	+2.5	19,948	+1.5
Maine.....	169	2,857	-2.8	78,408	-1.7	27	1,022	-25.3	14,907	-15.4
Maryland.....	94	12,606	-1.2	356,213	-2.3	26	1,433	+2.7	18,809	+7.1
Massachusetts.....	13 138	46,068	-.3	1,306,412	+1.1	92	3,728	-3.7	68,018	-2.7
Michigan.....	414	22,402	-.9	658,666	-1.0	72	4,031	-5.0	52,010	-3.8
Minnesota.....	233	12,906	-1.9	351,545	-1.5	61	2,859	-4.3	37,960	+9.1
Mississippi.....	213	2,056	-4.0	39,193	-1.9	20	516	-8.8	4,347	-6.0
Missouri.....	222	21,856	-.7	578,713	+9.9	80	4,539	+3.2	56,044	+8.7
Montana.....	111	1,839	-.7	53,947	+5.4	17	268	-4.6	3,935	-3.6
Nebraska.....	301	5,895	+1.8	151,037	+2.7	32	1,607	+6.8	18,147	+8.0
Nevada.....	40	392	+5.9	10,550	+1.3	12	172	-11.8	3,223	-8.5
New Hampshire.....	143	2,169	+6.1	59,792	+2.5	27	730	-51.6	8,853	-51.3
New Jersey.....	280	22,898	-1.4	682,763	-.3	92	4,415	-26.5	57,968	-25.0
New Mexico.....	55	551	-7.9	12,234	-1.2	14	297	-3.6	3,202	-4.4
New York.....	906	105,927	-2.4	3,248,156	-2.1	285	31,365	+1.5	502,788	+3.2
North Carolina.....	96	1,778	-1.5	34,850	-4.2	35	1,238	-5.4	11,279	-3.9
North Dakota.....	171	1,202	-4.2	29,923	+6.1	17	324	+1.6	3,746	+6.0
Ohio.....	493	33,400	-1.9	857,509	+2.2	165	8,835	-.8	113,758	-.8
Oklahoma.....	247	6,074	-3.1	136,715	-.7	38	776	+1.3	7,406	+1.6
Oregon.....	187	5,746	-1.6	147,045	+2.2	39	1,099	+1.8	15,328	+2.2
Pennsylvania.....	703	59,886	-1.8	1,613,361	-2.0	193	10,084	+1.4	130,597	+1.8
Rhode Island.....	35	3,434	-2.5	98,279	-1.1	23	422	-14.6	5,974	-8.1
South Carolina.....	71	1,631	-3.7	25,261	-.2	18	307	-4.4	2,278	+6.1
South Dakota.....	129	1,020	+4.2	26,642	+6.4	14	299	-3.5	3,667	-2.9
Tennessee.....	256	4,892	-2.0	107,879	-.8	40	2,129	+1.8	19,119	+3.5
Texas.....	135	6,847	-.7	185,279	-1.9	41	3,395	+1.3	41,426	+1.3
Utah.....	69	1,807	-3.2	38,439	+3.4	10	364	+2.8	4,751	-1.1
Vermont.....	119	935	-2.0	23,358	+1.4	28	572	-16.5	6,390	-13.5
Virginia.....	179	5,837	-.8	141,722	+1.4	38	2,073	-2.1	22,590	-2.8
Washington.....	206	9,829	-.2	265,846	-.2	59	1,975	-4.4	24,261	-4.6
West Virginia.....	133	6,192	+1.2	158,296	+2.0	41	1,111	-2.0	12,937	+1.1
Wisconsin.....	14 42	11,088	-.9	308,478	+1.7	12 39	1,112	-5.2	(15)	-----
Wyoming.....	48	428	-2.7	10,650	+2.2	12	157	-8.2	2,337	-14.0

¹² Includes restaurants.
¹³ Includes steam railroads.

¹⁴ Includes railways and express.
¹⁵ Data not supplied.

TREND OF EMPLOYMENT

1439

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS
IN SEPTEMBER AND OCTOBER, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Laundries					Dyeing and cleaning				
	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change	Number of establishments	Number on pay roll October, 1932	Per cent of change	Amount of pay roll (1 week) October, 1932	Per cent of change
Alabama.....	4	412	-0.7	\$3,700	-0.5	4	181	-6.7	\$1,798	-4.3
Arkansas.....	19	487	-2.6	4,668	-4.6	3	35	+12.9	463	+17.2
Arizona.....	9	388	+1.5	5,830	+2.3					
California.....	16 77	5,910	-2.2	110,223	-3.1					
Colorado.....	11	859	-1.3	12,526	+(11)	11	160	-5.9	3,056	-6.9
Connecticut.....	28	1,351	-1.0	22,803	+1.2	12	249	-1.2	5,413	-5.4
Delaware.....	4	308	-2.8	4,735	-3.0	3	43	+7.5	731	+6.1
District of Columbia.....	20	2,593	-3.2	40,704	-3.5	6	132	-1.8	2,721	-1.2
Florida.....	9	435	-1.4	4,247	-8.7					
Georgia.....	12	654	-1.5	6,116	-3.0	4	134	(10)	1,548	-1.6
Idaho.....										
Illinois.....	16 19	1,114	-3.4	16,454	-3.1					
Indiana.....	20	1,525	-2.6	19,809	-4.0	10	182	-4.7	3,070	-7.5
Iowa.....	3	214	-1.8	3,322	-3.4					
Kansas.....	40	1,243	+1.2	13,651	+1.5	3	18	+38.5	261	+45.8
Kentucky.....	16	722	-3.1	8,885	-4.4	5	226	-1.3	3,467	-2.4
Louisiana.....										
Maine.....	20	434	-14.2	6,344	-16.3					
Maryland.....	25	1,920	-1.2	28,790	-2.0	9	443	+1.5	6,289	-7.7
Massachusetts.....	104	3,494	+1.4	58,135	+1.6	121	1,957	-3.0	33,962	-8.2
Michigan.....	23	1,620	-3.1	20,743	-3.7	18	604	-2.7	10,582	-6.3
Minnesota.....	14	809	-1.2	13,032	-5.1	12	350	-1.1	6,708	+1.1
Mississippi.....	6	318	-5.9	2,808	-8.2					
Missouri.....	35	2,467	-1.6	34,663	-1.7	11	384	+1.6	6,924	+4.2
Montana.....	13	312	+1.6	5,620	-1.6	3	22	-4.3	426	-8.6
Nebraska.....	7	449	-10.2	6,537	-10.2	3	56	+3.7	1,089	-4.5
Nevada.....	4	58	(10)	1,204	-5.4					
New Hampshire.....	17	292	-12.0	4,465	-11.6					
New Jersey.....	25	3,004	-1.4	61,164	-4.1	8	282	+1.4	7,593	-3.3
New Mexico.....	6	238	-4.0	3,656	-3.6					
New York.....	69	6,915	-1.1	119,831	-1.8	18	589	+1.0	11,545	-8.8
North Carolina.....	11	700	-1.1	7,287	-2.1					
North Dakota.....	8	172	-1.1	2,919	-3.9					
Ohio.....	88	4,631	-1.4	68,817	-4.4	46	1,652	+1.3	28,514	-1.4
Oklahoma.....	9	637	-1.5	7,866	-6.7	4	164	-3.0	2,184	-3.8
Oregon.....	4	320	-1.9	5,097	-2.3	3	41	-2.4	907	-1.5
Pennsylvania.....	43	3,295	-1.5	50,199	+1.1	22	1,138	+1.1	20,642	+1.3
Rhode Island.....	19	1,112	+1.7	19,261	+2.1	6	313	+1.0	6,136	+3.0
South Carolina.....	8	319	-4.5	3,069	-4.1	3	38	+2.7	517	+2.0
South Dakota.....	7	141	-2.1	1,923	-7.2					
Tennessee.....	14	1,057	-2.6	8,552	-5.7	5	45	-2.2	694	-4.4
Texas.....	25	1,460	+3.2	16,139	-1.8	15	396	-1.8	6,406	-4.1
Utah.....	7	523	-1.9	7,085	-1.5	8	131	-5.1	2,473	-1.5
Vermont.....	5	75	-3.8	961	-8.5	3	26	(10)	494	-1.8
Virginia.....	13	912	-3.6	10,585	-5.9	21	259	+2.4	3,891	-1.5
Washington.....	18	813	-1.6	15,615	-2.2	12	166	+2.5	3,254	+1.6
West Virginia.....	22	736	+1.7	9,902	+1.2	9	214	-1.9	2,989	+1.7
Wisconsin.....	16 28	999	-3.5	13,984	-4.3					
Wyoming.....	3	86	-4.4	1,561	-4.9					

(10) No change.

(11) Less than one-tenth of 1 per cent.

(12) Includes dyeing and cleaning.

Employment and Pay Roll in October, 1932, in Cities of Over 500,000 Population

IN THE following table are presented the fluctuations in employment and pay-roll totals in October, 1932, as compared with September, 1932, in 13 cities of the United States having a population of 500,000 or over. These changes are computed from reports received from identical establishments in each of the months considered.

In addition to including reports received from establishments in the several industrial groups regularly covered in the bureau's survey, excluding building construction, reports have also been secured from other establishments in these cities for inclusion in these totals. Information concerning employment in building construction is not available for all cities at this time and therefore has not been included.

FLUCTUATIONS IN EMPLOYMENT AND PAY ROLL IN OCTOBER, 1932, AS COMPARED WITH SEPTEMBER, 1932

Cities	Number of establishments reporting in both months	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1932	October, 1932		September, 1932	October, 1932	
New York City.....	2,043	292,877	297,529	+1.6	\$8,142,581	\$8,156,284	+0.2
Chicago, Ill.....	1,856	198,421	197,699	-.4	4,650,273	4,630,365	-.4
Philadelphia, Pa.....	651	116,543	121,544	+4.3	2,534,514	2,661,037	+5.0
Detroit, Mich.....	689	163,884	141,423	-13.7	2,641,685	2,855,263	+8.1
Los Angeles, Calif.....	674	54,699	54,801	+.2	1,275,243	1,277,117	+.1
Cleveland, Ohio.....	1,080	83,225	84,094	+1.0	1,689,434	1,747,784	+3.5
St. Louis, Mo.....	493	63,558	64,548	+1.6	1,324,148	1,358,863	+2.6
Baltimore, Md.....	554	45,964	45,954	-(¹)	912,491	908,827	-.4
Boston, Mass.....	2,952	84,905	87,351	+2.9	2,057,146	2,080,115	+1.1
Pittsburgh, Pa.....	329	46,332	47,415	+2.3	873,730	885,572	+1.4
San Francisco, Calif.....	1,097	44,678	43,173	-3.4	1,082,014	1,082,935	+.1
Buffalo, N. Y.....	267	35,913	36,801	+2.5	804,645	825,964	+2.6
Milwaukee, Wis.....	473	36,989	37,146	+.4	728,118	744,222	+2.2

¹ Less than one-tenth of 1 per cent.

Employment in Executive Civil Service of the United States, October, 1932

THERE were 9,225 fewer employees on the Federal pay roll at the end of October, 1932, than at the end of October, 1931. Comparing October, 1932, with September, 1932, there was a loss of 2,423 employees.

These figures do not include the legislative, judicial, or Army and Navy services. The data as shown in the table below are compiled by various Federal departments and offices and sent to the United States Civil Service Commission, where they are assembled. They are tabulated by the Bureau of Labor Statistics and published here by courtesy of the Civil Service Commission, and in compliance with the direction of Congress. No information has as yet been collected relative to the amounts of pay rolls. Because of the importance of Washington as a Government center, the figures for the District of Columbia and for the Government service outside of the District of Columbia are shown separately.

On October 31, 1932, there were 572,867 employees in the executive civil service of the United States. Of this number, 534,527 were permanent and 38,340 were temporary employees. In the interval between October 31, 1931, and October 31, 1932, there was a loss of

1.3 per cent in the number of permanent employees and a decrease of 6.0 per cent in the number of temporary employees. This makes a decrease of 1.6 per cent in the total number of Government employees throughout the United States.

The number of employees in the District of Columbia showed a decrease of 4.3 per cent in October, 1932, as compared with October, 1931. The number of permanent employees decreased 1.2 per cent and the number of temporary employees 47.5 per cent. There was a decrease of one-tenth of 1 per cent in the number of Federal employees in the District of Columbia comparing October, 1932, with September, 1932.

During the month of October, 1932, there were 15,491 additions made to the Federal pay roll throughout the United States and 17,914 separations. This indicates a net turnover rate of 2.7 for the month. The turnover rate for the District of Columbia was 0.59.

On October 31, 1932, there were 66,974 employees on the Government pay roll in the District of Columbia. Of this number, 64,484 were permanent and 2,490 were temporary workers.

EMPLOYEES IN THE EXECUTIVE CIVIL SERVICE OF THE UNITED STATES, OCTOBER, 1931, SEPTEMBER AND OCTOBER, 1932¹

	District of Columbia			Outside district			Entire service		
	Perma- nent	Tem- po- rary ²	Total	Perma- nent	Tem- po- rary ²	Total	Perma- nent	Tem- po- rary ²	Total
Number of employees:									
October, 1931.....	65,248	4,740	69,988	476,050	36,054	512,104	541,298	40,794	582,092
September, 1932.....	64,616	2,454	67,070	470,502	37,718	508,220	535,118	40,172	575,290
October, 1932.....	64,484	2,490	66,974	470,043	35,850	505,893	534,527	38,340	572,867
Gain or loss:									
October, 1931-October, 1932.....	-764	-2,250	-3,014	-6,007	-204	-6,211	-6,771	-2,454	-9,225
September, 1932-October, 1932.....	-132	+36	-96	-459	-1,868	-2,327	-591	-1,832	-2,423
Per cent of change:									
October, 1931-October, 1932.....	-1.2	-47.5	-4.3	-1.3	-0.6	-1.2	-1.3	-6.0	-1.6
September, 1932-October, 1932.....	-0.2	-1.5	-0.1	-0.1	-5.0	-0.5	-0.1	-4.6	-0.4
Labor turnover, October, 1932:									
Additions.....	201	197	398	1,845	13,248	15,093	2,046	13,445	15,491
Separations.....	333	161	494	2,304	15,116	17,420	2,637	15,277	17,914
Turnover rate.....	0.31	6.51	0.59	0.39	36.02	2.98	0.38	34.25	2.70

¹ Certain revisions have been made from time to time by the Civil Service Commission in dropping certain classes of employees previously carried in the tabulations. Thus, in the District of Columbia, 68 mail contractors and special-delivery messengers were eliminated from the enumeration in May, 1932, and in the service outside the District of Columbia 35,800 star-route and other contractors, clerks in charge of mail contract stations, clerks in third-class post offices, and special-delivery messengers were eliminated in April, 1932, and 835 collaborators of the Department of Agriculture in June, 1932. In the table, in order to make the figures comparable for all the months shown, it was assumed that the number of these employees was the same in 1931, as in the month they were dropped from the tabulation (actual figures not being available from the Civil Service Commission), and the data for this month have been revised accordingly in this table.

² Not including field service of the Post Office Department.

Employment in Building Construction in October, 1932

EMPLOYMENT in the building-construction industry increased 0.5 per cent in October, 1932, as compared with September, 1932, and pay-roll totals decreased 2.7 per cent over the month interval.

The per cents of change of employment and pay-roll totals in October, 1932, as compared with September, 1932, are based on returns made by 10,397 firms employing, in October, 85,300 workers in the various trades in the building-construction industry. These reports cover operations in various localities in 34 States and the District of Columbia.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE BUILDING CONSTRUCTION INDUSTRY IN IDENTICAL FIRMS, SEPTEMBER AND OCTOBER, 1932

Locality	Number of firms reporting	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		Sept. 15	Oct. 15		Sept. 15	Oct. 15	
Alabama: Birmingham.....	71	425	472	+11.1	\$5,787	\$6,513	+12.5
California:							
Los Angeles ¹	24	809	820	+1.4	17,161	17,361	+1.2
San Francisco-Oakland ¹	30	842	726	-13.8	17,581	15,164	-13.7
Other reporting localities ¹	20	355	368	+3.7	7,637	9,212	+20.6
Colorado: Denver.....	200	711	759	+6.8	15,422	16,629	+7.8
Connecticut:							
Bridgeport.....	127	549	582	+6.0	12,905	13,191	+2.2
Hartford.....	215	978	1,067	+9.1	25,883	27,338	+5.6
New Haven.....	186	1,385	1,198	-13.5	37,747	32,655	-13.5
Delaware: Wilmington.....	117	1,259	1,292	+2.6	26,358	26,796	+1.7
District of Columbia.....	553	6,597	7,120	+7.9	186,262	195,571	+5.0
Florida:							
Jacksonville.....	49	281	273	-2.8	3,719	3,709	-.3
Miami.....	77	670	603	-10.0	12,831	12,382	-3.5
Georgia: Atlanta.....	127	1,408	1,536	+9.1	20,357	22,828	+12.1
Illinois:							
Chicago ¹	124	1,267	1,437	+13.4	40,010	41,758	+4.4
Other reporting localities ¹	70	571	655	+14.7	13,996	13,946	-.4
Indiana:							
Evansville.....	37	236	239	+1.3	4,598	4,838	+5.2
Fort Wayne.....	102	536	502	-6.3	10,845	9,967	-8.1
Indianapolis.....	169	1,067	1,055	-1.1	25,026	22,396	-10.5
South Bend.....	41	205	177	-13.7	4,111	3,568	-13.2
Iowa: Des Moines.....	108	862	1,015	+17.7	17,855	25,094	+40.5
Kansas: Wichita.....	68	522	547	+4.8	10,190	12,462	+22.3
Kentucky: Louisville.....	126	833	825	-1.0	15,981	16,405	+2.7
Louisiana: New Orleans.....	135	2,041	1,466	-28.2	33,609	26,615	-20.8
Maine: Portland.....	104	472	567	+20.1	11,028	13,455	+22.0
Maryland: Baltimore ¹	116	1,182	1,070	-9.5	22,526	18,765	-16.7
Massachusetts: All reporting localities ¹	734	5,900	6,007	+1.8	175,592	160,993	-8.3
Michigan:							
Detroit.....	438	3,033	3,166	+4.4	67,211	71,568	+6.5
Flint.....	49	161	199	+23.6	2,685	3,313	+23.4
Grand Rapids.....	108	673	652	-3.1	14,979	13,172	-12.1
Minnesota:							
Duluth.....	54	373	315	-15.5	6,121	6,729	+9.9
Minneapolis.....	228	1,789	1,818	+1.6	39,817	39,328	-1.2
St. Paul.....	146	919	902	-1.8	22,974	21,971	-4.4
Missouri:							
Kansas City ²	254	1,491	1,444	-3.2	35,473	34,523	-2.7
St. Louis.....	451	2,552	2,588	+1.4	63,605	69,333	+9.1
Nebraska: Omaha.....	139	861	776	-9.9	18,044	17,374	-3.7
New York:							
New York City ¹	347	10,498	10,324	-1.7	413,291	364,105	-11.9
Other reporting localities ¹	175	3,932	3,901	-.8	114,311	112,903	-1.2
North Carolina: Charlotte.....	38	262	200	-23.7	3,252	2,500	-23.1
Ohio:							
Akron.....	79	251	297	+18.3	4,598	5,947	+29.3
Cincinnati ³	482	2,443	2,491	+2.0	58,536	56,826	-2.9
Cleveland.....	478	2,435	2,769	+13.7	63,817	74,026	+16.0
Dayton.....	116	395	403	+2.0	8,534	9,166	+7.4
Youngstown.....	66	315	312	-1.0	6,034	5,459	-9.5
Oklahoma:							
Oklahoma City.....	98	459	365	-20.5	7,789	6,352	-18.4
Tulsa.....	52	129	141	+9.3	2,258	2,658	+17.7
Oregon: Portland.....	188	1,015	865	-14.8	22,021	18,015	-18.2
Pennsylvania: ⁴							
Erie area ¹	25	205	154	-24.9	4,667	2,983	-36.1
Philadelphia area ¹	448	3,957	3,838	-3.0	90,538	85,225	-5.9
Pittsburgh area ¹	220	1,208	1,192	-1.3	28,359	31,670	+11.7
Reading-Lebanon area ¹	45	332	323	-2.7	6,872	6,783	-1.3
Scranton area ¹	31	152	192	+26.3	3,180	4,944	+55.5
Other reporting areas ¹	285	2,442	2,306	-5.6	52,178	48,316	-7.4
Rhode Island: Providence.....	235	1,598	1,492	-6.6	40,149	36,528	-9.0
Tennessee:							
Chattanooga.....	31	203	224	+10.3	2,900	3,030	+4.6
Knoxville.....	48	562	574	+2.1	6,925	5,867	-15.3
Memphis.....	92	472	356	-24.6	9,011	6,252	-30.6
Nashville.....	72	603	818	+34.3	9,990	13,856	+38.7

¹ Data supplied by cooperating State bureaus.² Includes both Kansas City, Mo., and Kansas City, Kans.³ Includes Covington and Newport, Ky.⁴ Each separate area includes from 2 to 8 counties.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, SEPTEMBER AND OCTOBER, 1932—Continued

Locality	Number of firms reporting	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		Sept. 15	Oct. 15		Sept. 15	Oct. 15	
Texas:							
Dallas.....	159	892	975	+9.3	\$14,773	\$16,264	+10.1
El Paso.....	23	104	98	-5.8	1,151	1,392	+20.9
Houston.....	138	680	680	(¹)	12,338	11,549	-6.4
San Antonio.....	105	736	775	+5.3	11,037	11,739	+6.4
Utah: Salt Lake City.....	84	381	328	-13.9	7,091	6,777	-4.4
Virginia:							
Norfolk-Portsmouth.....	88	495	500	+19.2	9,293	9,855	+6.0
Richmond.....	142	887	987	+11.3	17,807	19,725	+10.8
Washington:							
Seattle.....	170	893	1,138	+27.4	20,045	23,031	+14.9
Spokane.....	54	202	170	-15.8	4,124	3,386	-17.9
Tacoma.....	79	152	109	-28.3	2,740	1,953	-28.7
West Virginia: Wheeling.....	45	156	179	+14.7	3,452	3,913	+13.4
Wisconsin: All reporting localities ¹	62	1,587	1,496	-5.7	31,678	28,371	-10.4
Total, all localities.....	10,397	84,854	85,300	+0.5	2,145,665	2,088,348	-2.7

¹Data supplied by cooperating State bureaus.²No change.

Employment on Class I Steam Railroads in the United States

DATA are not yet available concerning railroad employment for October, 1932. Reports of the Interstate Commerce Commission for Class I railroads show that the number of employees (exclusive of executives and officials) increased from 983,112 on August 15, 1932, to 997,321 on September 15, 1932, or 1.4 per cent; the amount of pay roll decreased from \$114,850,526 in August, to \$113,524,006 in September, or 1.2 per cent.

The monthly trend of employment from January, 1923, to September, 1932, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in the following table. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the 12-month average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT, ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY, 1923, TO SEPTEMBER, 1932

[12-month average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3	73.7	61.2
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7	60.3
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9	60.5
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5	60.0
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9	59.7
June.....	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8	57.8
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	72.4	56.4
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	71.2	55.0
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	69.3	55.8
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	67.7	-----
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	64.5	-----
December.....	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	62.6	-----
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	70.6	¹ 58.5

¹ Average for 9 months.

Table 2 shows the total number of employees on the 15th day each of September, 1931, and August and September, 1932, and total pay roll for the entire months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, SEPTEMBER, 1931, AND AUGUST AND SEPTEMBER, 1932

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupations	Number of employees at middle of month			Total earnings		
	Sept. 15, 1931	Aug. 15, 1932	Sept. 15, 1932	September, 1931	August, 1932	September, 1932
Professional, clerical, and general.....	216,936	176,046	175,248	\$31,555,178	\$23,317,782	\$22,783,075
Clerks.....	117,522	92,820	92,479	16,052,521	11,680,311	11,346,397
Stenographers and typists.....	20,267	16,639	16,465	2,628,693	1,966,178	1,915,241
Maintenance of way and structures.....	282,946	217,255	215,878	24,754,216	16,225,154	15,622,801
Laborers, extra gang and work train.....	28,119	16,918	15,111	1,817,905	907,079	768,536
Laborers, track and roadway section.....	153,824	120,319	120,601	9,735,198	6,219,907	5,955,020
Maintenance of equipment and stores.....	326,679	257,307	266,227	38,893,055	26,138,075	25,711,171
Carmen.....	67,628	52,430	53,992	9,008,210	6,024,876	5,912,342
Machinists.....	43,605	35,914	37,628	5,963,904	4,166,050	4,114,437
Skilled trades helpers.....	71,268	55,227	57,696	7,015,639	4,557,755	4,480,226
Laborers (shops, engine houses, power plants, and stores).....	26,908	21,361	21,496	2,403,203	1,630,649	1,577,799
Common laborers (shop, engine houses, power plants, and stores).....	34,911	27,037	27,995	2,412,130	1,581,337	1,527,905
Transportation, other than train, engine and yard.....	157,411	130,000	130,837	19,536,232	14,686,035	14,370,243
Station agents.....	27,369	25,573	25,513	4,274,650	3,644,620	3,505,915
Telegraphers, telephoners, and towermen.....	19,117	16,572	16,437	2,913,544	2,288,107	2,193,502
Truckers (stations, warehouses, and platforms).....	23,080	16,443	17,471	2,077,407	1,278,670	1,361,658
Crossing and bridge flagmen and gatemen.....	18,885	18,067	17,970	1,452,551	1,230,702	1,214,795
Transportation (yard masters, switch tenders, and hostlers).....	17,118	13,226	13,064	3,205,503	2,206,697	2,136,219
Transportation, train and engine.....	238,028	189,278	196,067	45,485,341	32,276,783	32,900,494
Road conductors.....	27,190	22,071	22,653	6,325,606	4,688,782	4,729,443
Road brakemen and flagmen.....	52,204	42,067	43,648	8,632,082	6,115,304	6,322,031
Yard brakemen and yard helpers.....	40,616	31,432	32,686	6,379,903	4,225,904	4,318,600
Road engineers and motormen.....	32,013	25,981	26,711	8,385,782	6,136,691	6,258,218
Road firemen and helpers.....	32,746	26,810	27,911	6,055,605	4,385,760	4,496,258
All employees.....	1,239,118	983,112	997,321	163,429,525	114,850,526	113,524,006

RETAIL PRICES

Retail Prices of Food in October, 1932

THE following tables are compiled from simple averages of the actual selling prices received monthly by the Bureau of Labor Statistics of the United States Department of Labor from retail dealers in 51 cities.

Indexes of all articles combined, or groups of articles combined both for cities and for the United States, are weighted according to the average family consumption. Consumption figures used since January, 1921, are given in Bulletin 495 (p. 13). Those used for prior dates are given in Bulletin 300 (p. 61).

Table 1 shows the average retail prices of the principal food articles for the United States, 51 cities combined, on October 15, 1931, and September 15 and October 15, 1932.

TABLE 1.—AVERAGE RETAIL PRICES OF FOOD IN THE UNITED STATES (51 CITIES) ON OCTOBER 15, 1931, AND SEPTEMBER 15 AND OCTOBER 15, 1932

Article	Unit	Oct. 15, 1931	Sept. 15, 1932	Oct. 15, 1932	Article	Unit	Oct. 15, 1931	Sept. 15, 1932	Oct. 15, 1932
		Cents	Cents	Cents			Cents	Cents	Cents
Sirloin steak.....	Pound.....	38.6	34.4	33.1	Flour.....	Pound.....	3.3	3.1	3.1
Round steak.....	do.....	33.6	30.2	28.9	Corn meal.....	do.....	4.4	3.8	3.7
Rib roast.....	do.....	28.0	24.3	23.7	Rollod oats.....	do.....	7.9	7.4	7.4
Chuck roast.....	do.....	20.7	17.8	17.3	Corn flakes.....	8-oz. pkg.....	8.9	8.4	8.5
Plate beef.....	do.....	13.5	11.2	11.3	Wheat cereal.....	28-oz. pkg.....	23.3	22.5	22.4
Pork chops.....	do.....	29.3	23.8	21.5	Macaroni.....	Pound.....	16.2	15.1	15.1
Bacon, sliced.....	do.....	34.3	23.5	23.1	Rice.....	do.....	7.8	6.5	6.4
Ham, sliced.....	do.....	44.2	35.2	34.0	Beans, navy.....	do.....	6.7	5.0	4.9
Lamb, leg of.....	do.....	27.5	23.4	22.1	Potatoes.....	do.....	1.8	1.5	1.5
Hens.....	do.....	29.9	23.5	23.1	Onions.....	do.....	4.3	3.0	2.8
Salmon, red, canned.....	16-oz. can.....	30.3	20.6	20.0	Cabbage.....	do.....	3.2	2.6	2.4
Milk, fresh.....	Quart.....	12.0	10.6	10.7	Pork and beans.....	16-oz. can.....	8.2	7.0	6.9
Milk, evaporated.....	14½-oz. can.....	8.0	6.1	6.1	Corn, canned.....	No. 2 can.....	12.6	10.4	10.3
Butter.....	Pound.....	39.9	26.9	26.7	Peas, canned.....	do.....	13.7	12.7	12.6
Margarine.....	do.....	18.8	14.5	14.3	Tomatoes, canned.....	do.....	9.8	9.1	9.0
Cheese.....	do.....	27.1	22.7	22.6	Sugar.....	Pound.....	5.6	5.1	5.1
Lard.....	do.....	12.4	9.1	9.0	Tea.....	do.....	75.6	69.9	68.5
Vegetable lard sub- stitute.....	do.....	22.7	19.0	19.1	Coffee.....	do.....	32.1	30.1	30.3
Eggs, strictly fresh.....	Dozen.....	37.9	29.5	34.6	Prunes.....	do.....	11.1	9.1	8.9
Bread.....	Pound.....	7.3	6.7	6.7	Raisins.....	do.....	11.4	11.4	10.7
					Bananas.....	Dozen.....	24.0	21.3	22.2
					Oranges.....	Pound.....	37.2	30.4	30.5

Table 2 shows the trend in the weighted retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. The articles included in these groups will be found in the May, 1932, issue of this publication.

TABLE 2.—WEIGHTED INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS, FOR THE UNITED STATES, BY YEARS, FOR 1913, 1920, 1928, 1929, 1930, 1931, AND BY MONTHS, 1931 AND 1932

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913.....	100.0	100.0	100.0	1931—Continued.			
1920.....	232.1	185.7	185.1	October.....	129.8	142.7	117.0
1928.....	167.2	179.2	150.0	November.....	129.1	135.4	114.4
1929.....	164.1	188.4	148.6	December.....	127.8	129.3	111.4
1930.....	158.0	175.8	136.5	1932:			
1931: Average for year.....	135.9	147.0	114.6	January.....	126.4	123.4	106.5
January.....	147.1	159.5	123.6	February.....	125.0	117.3	102.9
February.....	144.6	153.4	120.2	March.....	124.3	118.9	101.9
March.....	142.4	152.5	120.5	April.....	122.9	118.6	97.4
April.....	138.9	151.4	116.5	May.....	122.6	115.3	94.3
May.....	137.7	149.3	110.3	June.....	122.5	113.4	92.6
June.....	136.3	145.7	108.3	July.....	121.2	122.6	91.4
July.....	134.3	147.8	109.6	August.....	120.4	120.1	93.1
August.....	132.0	149.1	111.9	September.....	119.2	119.2	93.5
September.....	130.2	147.7	114.3	October.....	119.0	114.5	93.8

Index Numbers of Retail Prices of Food in the United States

IN TABLE 3 index numbers are given which show the changes in the retail prices of specified food articles, and in the weighted cost of all articles combined by years, for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. These index numbers are based on the average for the year 1913 as 100.0.

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, AND BY MONTHS FOR 1931 AND 1932

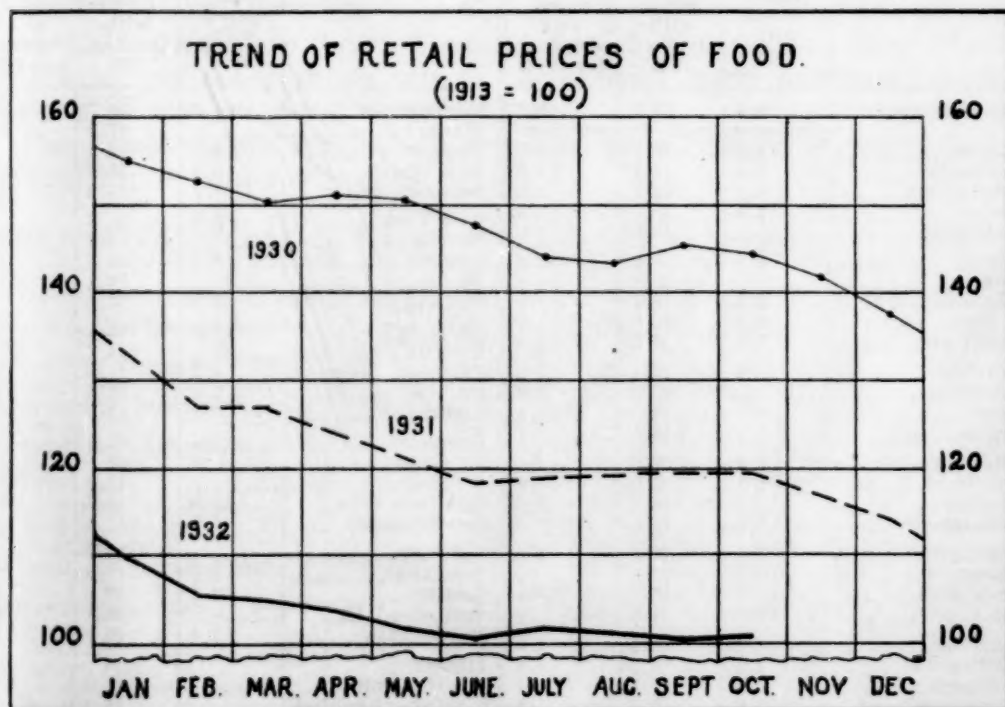
[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lamb, leg of	Hens	Milk	Butter
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	207.9	209.9	187.6	183.0
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	208.5	175.6	159.6	147.5
1929.....	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	212.2	186.4	160.7	143.9
1930.....	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	185.7	166.7	157.3	120.4
1931:	155.1	154.3	146.0	134.4	118.2	138.6	134.8	170.6	156.1	145.5	138.2	92.4
January.....	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	166.1	153.5	149.4	98.4
February.....	161.4	161.0	154.0	145.6	131.4	131.4	145.2	183.3	164.6	148.8	146.1	94.8
March.....	158.7	157.8	153.0	141.9	128.1	140.0	143.0	178.4	164.0	150.2	144.9	97.4
April.....	157.5	156.5	150.0	139.4	124.8	141.4	141.1	175.5	165.6	153.1	141.6	91.9
May.....	155.5	154.7	147.0	135.6	119.8	143.3	139.3	172.9	165.1	148.8	138.2	81.5
June.....	152.4	151.1	142.9	130.6	112.4	140.0	136.7	170.6	161.9	146.0	134.8	80.7
July.....	154.3	154.3	142.9	130.0	110.7	151.4	137.0	171.4	158.7	144.6	136.0	82.8
August.....	155.5	155.2	143.9	130.0	109.9	158.6	135.6	171.4	156.6	145.1	136.0	89.8
September.....	155.1	154.3	142.9	130.6	111.6	153.3	134.1	169.5	152.4	145.1	136.0	96.1
October.....	152.0	150.7	141.4	129.4	111.6	139.5	127.0	164.3	145.5	140.4	134.8	104.2
November.....	146.9	144.8	137.9	126.3	109.9	119.0	118.9	155.4	138.1	137.1	134.8	97.4
December.....	142.9	140.4	134.8	122.5	108.3	103.8	112.2	147.6	131.7	134.3	130.3	95.3
1932:												
January.....	137.4	135.0	129.8	115.6	101.7	99.5	101.5	136.8	127.5	131.0	129.2	84.3
February.....	130.7	127.4	123.2	108.1	97.5	91.0	96.7	136.4	125.4	127.2	128.1	77.0
March.....	129.9	127.8	123.2	108.1	95.9	102.4	95.2	136.1	131.7	128.2	127.0	77.0
April.....	131.5	128.3	122.7	108.8	95.9	102.4	92.2	134.9	135.4	124.9	123.6	70.0
May.....	129.9	127.4	120.2	106.3	91.7	94.8	88.5	131.2	132.3	120.7	121.3	65.5
June.....	129.1	127.4	118.7	105.6	88.4	93.8	85.9	129.7	128.6	113.1	121.3	62.9
July.....	139.0	139.0	125.8	113.1	92.6	121.4	87.8	133.8	131.7	110.8	120.2	62.4
August.....	137.4	138.1	124.2	112.5	92.6	111.0	88.5	132.7	127.0	108.5	118.0	70.0
September.....	135.4	135.4	122.7	111.3	92.6	113.3	87.0	130.9	123.8	110.3	119.1	70.2
October.....	130.3	129.6	119.7	108.1	93.4	102.4	85.6	126.4	116.9	108.5	120.2	69.7

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, AND BY MONTHS FOR 1931 AND 1932—Continued

Year and month	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota-toes	Sugar	Tea	Cof-fee	All arti-cles ¹ (weight-ed)
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1928.....	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929.....	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930.....	158.8	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1931.....	127.1	84.2	91.9	135.7	109.1	153.3	94.3	135.3	103.6	138.6	113.4	121.3
January.....	145.2	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	141.0	126.8	132.8
February.....	141.2	91.8	78.8	142.9	121.2	166.7	102.3	158.8	107.3	140.6	125.2	127.0
March.....	137.1	89.9	82.6	141.1	118.2	166.7	98.9	158.8	105.5	139.7	121.8	126.4
April.....	132.6	89.9	79.4	137.5	115.2	163.3	96.6	164.7	103.6	138.2	116.1	124.0
May.....	124.0	85.4	71.9	137.5	112.1	153.3	95.4	164.7	101.8	136.9	112.4	121.0
June.....	119.9	82.3	74.8	135.7	112.1	150.0	94.3	141.2	101.8	136.8	111.1	118.3
July.....	118.6	82.3	82.9	133.9	109.1	150.0	93.1	135.3	101.8	137.3	109.1	119.0
August.....	119.9	81.0	92.5	132.1	103.0	150.0	93.1	129.4	103.6	138.6	108.7	119.7
September.....	122.2	79.8	98.0	130.4	100.0	150.0	92.0	117.6	103.6	139.3	108.7	119.4
October.....	122.6	78.5	109.9	130.4	100.0	146.7	89.7	105.9	101.8	139.0	107.7	119.1
November.....	121.3	77.2	115.1	130.4	100.0	140.0	86.2	100.0	101.8	138.1	106.7	116.7
December.....	118.6	70.9	111.6	128.6	100.0	136.7	85.1	105.9	100.0	138.1	105.7	114.3
1932:												
January.....	115.4	63.9	85.8	126.8	100.0	133.3	85.1	100.0	98.2	136.2	104.4	109.3
February.....	110.4	59.5	70.1	125.0	100.0	133.3	83.9	100.0	96.4	135.3	104.0	105.3
March.....	107.7	57.6	61.2	125.0	97.0	130.0	81.6	100.0	94.5	134.7	103.4	105.0
April.....	105.4	55.1	58.0	123.2	97.0	130.0	79.3	100.0	92.7	133.1	102.3	103.7
May.....	101.8	52.5	58.0	123.2	97.0	130.0	77.0	105.9	89.1	132.4	100.7	101.3
June.....	100.9	49.4	60.3	123.2	97.0	130.0	75.9	117.6	89.1	130.5	99.7	100.1
July.....	99.5	53.8	66.1	121.4	97.0	126.7	75.9	111.8	90.9	129.2	99.7	101.0
August.....	102.3	56.3	77.7	121.4	93.9	126.7	74.7	100.0	92.7	128.9	99.3	100.8
September.....	102.7	57.6	85.5	119.6	93.9	126.7	74.7	88.2	92.7	128.5	101.0	100.3
October.....	102.3	57.0	100.3	119.6	93.9	123.3	73.6	88.2	92.7	125.9	101.7	100.4

¹ 22 articles in 1913-1920; 42 articles in 1921-1932.



Comparison of Retail Food Costs in 51 Cities

TABLE 4 shows for 39 cities the percentage of increase or decrease in the weighted retail cost of food in the United States in October, 1932, compared with the average cost in the year 1913, in October, 1931, and September, 1932. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of October schedules were received from 99 per cent of the firms in the 51 cities from which retail prices of food are collected.

Out of about 1,207 food reports 16 were not received—1 each in Baltimore, Birmingham, Bridgeport, Fall River, Louisville, Peoria, Pittsburgh, San Francisco, Seattle, and Springfield (Ill.); and 2 each in Butte, Mobile, and Portland (Oreg.).

Out of about 350 bread reports 2 were missing in Los Angeles.

A perfect record is shown for the following-named cities: Atlanta, Boston, Buffalo, Charleston (S. C.), Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Manchester, Memphis, Milwaukee, Minneapolis, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Philadelphia, Portland (Me.), Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, and Washington.

TABLE 4.—PERCENTAGE CHANGE IN THE WEIGHTED RETAIL COST OF FOOD IN OCTOBER, 1932, COMPARED WITH THE COST IN SEPTEMBER, 1932, OCTOBER, 1931, AND WITH THE COST IN THE YEAR 1913, BY CITIES

City	Percent- age increase October, 1932, com- pared with 1913	Percent- age decrease October, 1932, com- pared with October, 1931	Percent- age increase October, 1932, com- pared with Septem- ber, 1932	City	Percent- age increase October, 1932, com- pared with 1913	Percent- age decrease October, 1932, com- pared with October, 1931	Percent- age increase October, 1932, com- pared with Septem- ber, 1932
United States.....	0.4	15.7	0.1	Minneapolis.....	¹ 1.5	17.7	0.4
Atlanta.....	¹ 2.3	15.3	¹ 9	Mobile.....		17.9	.2
Baltimore.....	4.6	15.8	¹ 1.0	Newark.....	5.3	15.4	.2
Birmingham.....	1.1	12.8	1.6	New Haven.....	6.4	15.6	¹ .5
Boston.....	2.6	18.0	.5	New Orleans.....	¹ 9	13.6	¹ 1.8
Bridgeport.....		13.6	1.6	New York.....	9.8	14.3	.5
Buffalo.....	4.5	15.2	.2	Norfolk.....		13.0	¹ 1.0
Butte.....		19.4	¹ 1.8	Omaha.....	¹ 6.7	16.5	¹ .2
Charleston, S. C.....	3.3	16.4	1.7	Peoria.....		14.2	¹ .3
Chicago.....	9.5	16.6	¹ .3	Philadelphia.....	5.1	17.5	.5
Cincinnati.....	¹ 3.7	23.3	¹ 1.5	Pittsburgh.....	¹ 1.0	15.8	.4
Cleveland.....	¹ 6.2	16.4	¹ 1.6	Portland, Me.....		14.7	.5
Columbus.....		19.0	¹ 1.6	Portland, Oreg.....	¹ 4.7	11.3	.3
Dallas.....	¹ 4.6	14.7	1.1	Providence.....	2.0	18.0	¹ .1
Denver.....	¹ 5.3	13.5	¹ .3	Richmond.....	4.7	13.8	1.6
Detroit.....	¹ 7.8	21.9	¹ 2.1	Rochester.....		15.2	¹ .5
Fall River.....	¹ 1.1	15.8	¹ .8	St. Louis.....	¹ .7	17.1	¹ .9
Houston.....		16.7	¹ 1.0	St. Paul.....		17.2	¹ .2
Indianapolis.....	¹ 5.6	17.0	¹ .5	Salt Lake City.....	¹ 12.8	16.7	2.0
Jacksonville.....	¹ 7.4	16.5	¹ 1.4	San Francisco.....	6.3	11.6	.8
Kansas City.....	¹ .7	15.5	.6	Savannah.....		15.2	¹ 1.2
Little Rock.....	¹ 8.7	16.4	¹ .3	Scranton.....	5.9	17.0	.1
Los Angeles.....	¹ 7.5	14.8	.2	Seattle.....	¹ 2.1	15.2	¹ .8
Louisville.....	¹ 8.3	17.5	¹ 1.0	Springfield, Ill.....		13.8	¹ .6
Manchester.....	1.2	16.2	¹ 1.4	Washington.....	7.4	16.3	¹ .5
Memphis.....	¹ 7.6	16.1	¹ 1.1	Hawaii:			
Milwaukee.....	2.0	16.4	¹ .1	Honolulu.....		15.2	.2
				Other localities.....		14.9	(²)

¹ Decrease.

² No change.

Retail Prices of Coal in October, 1932

RETAIL prices of coal are secured in each of the 51 cities in which retail food prices are obtained. The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or bins where an extra handling is necessary.

Average prices for the United States for bituminous coal and for stove and chestnut sizes of Pennsylvania anthracite are computed

from the quotations received from retail dealers in all cities where these coals are sold for household use.

Table 1 shows the average prices of coal per ton of 2,000 pounds and index numbers for the United States on October 15, 1932, in comparison with the average prices on October 15, 1931, and September 15, 1932, together with the percentage change in the year and in the month.

TABLE 1.—AVERAGE RETAIL PRICE PER 2,000 POUNDS OF COAL FOR THE UNITED STATES, AND PER CENT OF CHANGE ON OCTOBER 15, 1932, COMPARED WITH OCTOBER 15, 1931, AND SEPTEMBER 15, 1932

Article	Average retail price on—			Per cent of increase (+) or decrease (–) Oct. 15, 1932, compared with—	
	Oct. 15, 1931	Sept. 15, 1932	Oct. 15, 1932	Oct. 15, 1931	Sept. 15, 1932
Pennsylvania anthracite:					
Stove—					
Average price per 2,000 pounds.....	\$15.00	\$13.74	\$13.79	–8.1	+0.4
Index (1913=100).....	194.2	177.9	178.5		
Chestnut—					
Average price per 2,000 pounds.....	\$14.97	\$13.52	\$13.58	–9.3	+0.4
Index (1913=100).....	189.1	170.8	171.5		
Bituminous:					
Average price per 2,000 pounds.....	\$8.22	\$7.54	\$7.60	–7.5	+0.8
Index (1913=100).....	151.3	138.7	139.9		

Table 2 shows average retail prices of coal on September 15 and October 15, 1932, by cities. In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON SEPTEMBER 15 AND OCTOBER 15, 1932

City, and kind of coal	Sept. 15, 1932	Oct. 15, 1932	City, and kind of coal	Sept. 15, 1932	Oct. 15, 1932
Atlanta, Ga.:			Chicago, Ill.—Continued.		
Bituminous, prepared sizes.....	\$5.74	\$6.20	Bituminous, prepared sizes—		
Baltimore, Md.:			High volatile.....	\$7.32	\$7.20
Pennsylvania anthracite—			Low volatile.....	9.69	9.98
Stove.....	13.00	13.25	Run of mine, low volatile.....	6.92	7.17
Chestnut.....	12.50	12.75	Cincinnati, Ohio:		
Bituminous, run of mine—			Bituminous, prepared sizes—		
High volatile.....	6.93	6.86	High volatile.....	5.00	5.25
Birmingham, Ala.:			Low volatile.....	7.00	7.50
Bituminous, prepared sizes.....	4.98	5.13	Cleveland, Ohio:		
Boston, Mass.:			Pennsylvania anthracite—		
Pennsylvania anthracite—			Stove.....	13.50	13.69
Stove.....	13.75	13.75	Chestnut.....	13.25	13.44
Chestnut.....	13.45	13.50	Bituminous, prepared sizes—		
Bridgeport, Conn.:			High volatile.....	5.97	5.49
Pennsylvania anthracite—			Low volatile.....	8.18	8.36
Stove.....	13.00	13.00	Columbus, Ohio:		
Chestnut.....	13.00	13.00	Bituminous, prepared sizes—		
Buffalo, N. Y.:			High volatile.....	5.04	5.04
Pennsylvania anthracite—			Low volatile.....	6.42	6.67
Stove.....	12.25	12.49	Dallas, Tex.:		
Chestnut.....	12.00	12.24	Arkansas anthracite, egg.....	13.50	14.00
Butte, Mont.:			Bituminous, prepared sizes.....	10.00	10.25
Bituminous, prepared sizes.....	9.74	9.75	Denver, Colo.:		
Charleston, S. C.:			Colorado anthracite—		
Bituminous, prepared sizes.....	9.50	8.67	Furnace, 1 and 2, mixed.....	14.69	14.50
Chicago, Ill.:			Stove, 3 and 5, mixed.....	14.69	14.50
Pennsylvania anthracite—			Bituminous, prepared sizes.....	7.59	7.61
Stove.....	15.64	15.75			
Chestnut.....	15.39	15.51			

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON SEPTEMBER 15, AND OCTOBER 15, 1932—Continued

City, and kind of coal	Sept. 15, 1932	Oct. 15, 1932	City, and kind of coal	Sept. 15, 1932	Oct. 15, 1932
Detroit, Mich.:			Norfolk, Va.—Continued.		
Pennsylvania anthracite—			Bituminous, prepared sizes—		
Stove.....	\$13.00	\$13.29	High volatile.....	\$6.50	\$6.50
Chestnut.....	12.88	13.13	Low volatile.....	8.00	8.00
Bituminous, prepared sizes—			Run of mine, low volatile.....	6.50	6.50
High volatile.....	5.93	6.03	Omaha, Nebr.:		
Low volatile.....	6.83	7.26	Bituminous, prepared sizes.....	8.70	8.77
Run of mine, low volatile.....	6.25	6.50	Peoria, Ill.:		
Fall River, Mass.:			Bituminous, prepared sizes.....	6.09	6.11
Pennsylvania anthracite—			Philadelphia, Pa.:		
Stove.....	14.50	14.50	Pennsylvania anthracite—		
Chestnut.....	14.25	14.25	Stove.....	11.50	11.75
Houston, Tex.:			Chestnut.....	11.25	11.50
Bituminous, prepared sizes.....	9.70	9.60	Pittsburgh, Pa.:		
Indianapolis, Ind.:			Pennsylvania anthracite, chest-		
Bituminous, prepared sizes—			nut.....	12.75	12.88
High volatile.....	4.93	5.07	Bituminous, prepared sizes.....	4.00	4.06
Low volatile.....	7.46	7.71	Portland, Me.:		
Run of mine, low volatile.....	6.05	6.05	Pennsylvania anthracite—		
Jacksonville, Fla.:			Stove.....	15.84	15.84
Bituminous, prepared sizes.....	9.00	9.00	Chestnut.....	15.60	15.60
Kansas City, Mo.:			Portland, Oreg.:		
Arkansas anthracite—			Bituminous, prepared sizes.....	11.96	11.86
Furnace.....	10.88	10.75	Providence, R. I.:		
Stove No. 4.....	12.08	12.25	Pennsylvania anthracite—		
Bituminous, prepared sizes.....	5.80	5.64	Stove.....	¹ 14.50	¹ 14.50
Little Rock, Ark.:			Chestnut.....	¹ 14.25	¹ 14.25
Arkansas anthracite, egg.....	11.25	10.75	Richmond, Va.:		
Bituminous, prepared sizes.....	8.17	8.28	Pennsylvania anthracite—		
Los Angeles, Calif.:			Stove.....	13.00	13.38
Bituminous, prepared sizes.....	15.75	16.25	Chestnut.....	13.00	13.38
Louisville, Ky.:			Bituminous, prepared sizes—		
Bituminous, prepared sizes—			High volatile.....	6.67	6.83
High volatile.....	4.69	4.68	Low volatile.....	7.65	7.98
Low volatile.....	7.25	7.25	Run of mine, low volatile.....	6.50	6.71
Manchester, N. H.:			Rochester, N. Y.:		
Pennsylvania anthracite—			Pennsylvania anthracite—		
Stove.....	14.67	14.83	Stove.....	13.13	13.38
Chestnut.....	14.67	14.83	Chestnut.....	12.88	13.13
Memphis, Tenn.:			St. Louis, Mo.:		
Bituminous, prepared sizes.....	5.67	5.67	Pennsylvania anthracite—		
Milwaukee, Wis.:			Stove.....	15.23	15.16
Pennsylvania anthracite—			Chestnut.....	15.23	15.16
Stove.....	14.85	15.05	Bituminous, prepared sizes.....	5.45	5.45
Chestnut.....	14.60	14.80	St. Paul, Minn.:		
Bituminous, prepared sizes—			Pennsylvania anthracite—		
High volatile.....	6.99	6.97	Stove.....	17.15	17.35
Low volatile.....	9.15	9.29	Chestnut.....	16.90	17.10
Minneapolis, Minn.:			Bituminous, prepared sizes—		
Pennsylvania anthracite—			High volatile.....	9.49	9.40
Stove.....	17.15	17.25	Low volatile.....	11.87	11.87
Chestnut.....	16.90	17.00	Salt Lake City, Utah:		
Bituminous, prepared sizes—			Bituminous, prepared sizes.....	\$7.39	\$7.39
High volatile.....	9.48	9.60	San Francisco, Calif.:		
Low volatile.....	11.87	11.85	New Mexico anthracite, Ceri-		
Mobile, Ala.:			llos egg.....	25.00	25.00
Bituminous, prepared sizes.....	7.23	7.16	Colorado anthracite, egg.....		24.50
Newark, N. J.:			Bituminous, prepared sizes.....	15.00	15.00
Pennsylvania anthracite—			Savannah, Ga.:		
Stove.....	12.08	12.19	Bituminous, prepared sizes.....	² 8.37	² 8.45
Chestnut.....	11.83	11.94	Seranton, Pa.:		
New Haven, Conn.:			Pennsylvania anthracite—		
Pennsylvania anthracite—			Stove.....	9.03	9.27
Stove.....	13.65	13.65	Chestnut.....	8.75	9.00
Chestnut.....	13.65	13.65	Seattle, Wash.:		
New Orleans, La.:			Bituminous, prepared sizes.....	10.11	9.86
Bituminous, prepared sizes.....	8.07	8.07	Springfield, Ill.:		
New York, N. Y.:			Bituminous, prepared sizes.....	4.34	3.79
Pennsylvania anthracite—			Washington, D. C.:		
Stove.....	12.50	12.46	Pennsylvania anthracite—		
Chestnut.....	12.25	12.21	Stove.....	³ 14.15	³ 14.46
Norfolk, Va.:			Chestnut.....	³ 13.85	³ 14.15
Pennsylvania anthracite—			Bituminous, prepared sizes—		
Stove.....	13.00	13.00	High volatile.....	³ 8.29	³ 8.29
Chestnut.....	13.00	13.00	Low volatile.....	³ 9.86	³ 10.21
			Run of mine, mixed.....	³ 7.50	³ 7.50

¹ The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bins.

² All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

³ Per ton of 2,240 pounds.

WHOLESALE PRICES

Index Numbers of Wholesale Prices, 1913 to October, 1932

THE following table presents the index numbers of wholesale prices by groups of commodities, by years, from 1913 to 1931, inclusive, and by months from January, 1931, to date:

INDEX NUMBERS OF WHOLESALE PRICES

[1926=100.0]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913.....	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	56.3	93.1	69.8
1914.....	71.2	64.7	70.9	54.6	56.6	80.2	52.7	81.4	56.8	89.9	68.1
1915.....	71.5	65.4	75.5	54.1	51.8	86.3	53.5	112.0	56.0	86.9	69.5
1916.....	84.4	75.7	93.4	70.4	74.3	116.5	67.6	160.7	61.4	100.6	85.5
1917.....	129.0	104.5	123.8	98.7	105.4	150.6	88.2	165.0	74.2	122.1	117.5
1918.....	148.0	119.1	125.7	137.2	109.2	136.5	98.6	182.3	93.3	134.4	131.3
1919.....	137.6	129.5	174.1	135.3	104.3	130.9	115.6	157.0	105.9	139.1	138.6
1920.....	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	154.4
1921.....	88.4	90.6	109.2	94.5	96.8	117.5	97.4	115.0	113.0	109.2	97.6
1922.....	93.8	87.6	104.6	100.2	107.3	102.9	97.3	100.3	103.5	92.8	96.7
1923.....	98.6	92.7	104.2	111.3	97.3	109.3	108.7	101.1	108.9	99.7	100.6
1924.....	100.0	91.0	101.5	106.7	92.0	106.3	102.3	98.9	104.9	93.6	98.1
1925.....	109.8	100.2	105.3	108.3	96.5	103.2	101.7	101.8	103.1	109.0	103.5
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927.....	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928.....	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	96.7
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930.....	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931.....	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1931:											
January.....	73.1	80.7	88.7	71.3	73.3	86.9	83.8	84.5	88.3	72.2	78.2
February.....	70.1	78.0	86.9	70.9	72.5	86.5	82.5	83.3	88.1	71.5	76.8
March.....	70.6	77.6	87.6	70.0	68.3	86.4	82.5	82.9	88.0	72.0	76.0
April.....	70.1	76.3	87.5	68.2	65.4	85.7	81.5	81.3	87.9	71.5	74.8
May.....	67.1	73.8	87.6	67.4	65.3	85.0	80.0	80.5	86.8	70.5	73.2
June.....	65.4	73.3	88.0	66.6	62.9	84.4	79.3	79.4	86.4	69.7	72.1
July.....	64.9	74.0	89.4	66.5	62.9	84.3	78.1	78.9	85.7	69.7	72.0
August.....	63.5	74.6	88.7	65.5	66.5	83.9	77.6	76.9	84.9	68.3	72.1
September.....	60.5	73.7	85.0	64.5	67.4	83.9	77.0	76.3	82.7	68.2	71.2
October.....	58.8	73.3	82.5	63.0	67.8	82.8	76.1	75.6	81.0	66.6	70.3
November.....	58.7	71.0	81.6	62.2	69.4	82.6	76.2	76.1	80.9	68.7	70.2
December.....	55.7	69.1	79.8	60.8	68.3	82.2	75.7	76.1	78.5	66.8	68.6
1932:											
January.....	52.8	64.7	79.3	59.9	67.9	81.8	74.8	75.7	77.7	65.6	67.3
February.....	50.6	62.5	78.3	59.8	68.3	80.9	73.4	75.5	77.5	64.7	66.3
March.....	50.2	62.3	77.3	58.7	67.9	80.8	73.2	75.3	77.1	64.7	66.0
April.....	49.2	61.0	75.0	57.0	70.2	80.3	72.5	74.4	76.3	64.7	65.5
May.....	46.6	59.3	72.5	55.6	70.7	80.1	71.5	73.6	74.8	64.4	64.4
June.....	45.7	58.8	70.8	53.9	71.6	79.9	70.8	73.1	74.7	64.2	63.9
July.....	47.9	60.9	68.6	52.7	72.3	79.2	69.7	73.0	74.0	64.3	64.5
August.....	49.1	61.8	69.7	54.0	72.1	80.1	69.6	73.3	73.6	64.6	65.2
September.....	49.1	61.8	72.2	57.0	70.8	80.1	70.5	72.9	73.7	64.7	65.3
October.....	46.9	60.5	72.8	55.0	71.1	80.3	70.7	72.7	73.7	64.1	64.4

INDEX NUMBERS OF SPECIFIED GROUPS OF COMMODITIES, OCTOBER, 1931, AND SEPTEMBER AND OCTOBER, 1932

[1926=100.0]

Group	October, 1931	Septem- ber, 1932	October, 1932
Raw materials.....	61.5	56.2	54.6
Semimanufactured articles.....	65.2	60.7	60.7
Finished products.....	75.1	70.4	69.6
Nonagricultural commodities.....	72.6	68.7	68.1
All commodities other than farm products and foods.....	72.9	70.4	70.2

Weekly Index Numbers of Wholesale Prices

A SUMMARIZATION of the weekly index numbers for the 10 major groups of commodities and for all commodities combined as issued during the month of October will be found in the following statement:

INDEX NUMBERS OF WHOLESALE PRICES FOR WEEKS OF OCTOBER 1, 8, 15, 22, AND 29

[1926=100.0]

Group	Week ending—				
	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29
All commodities.....	65.4	64.9	64.4	64.4	64.1
Farm products.....	49.5	48.8	47.4	47.0	46.2
Foods.....	62.0	61.5	60.7	60.8	60.1
Hides and leather products.....	73.3	73.0	72.5	72.8	72.2
Textile products.....	56.4	56.3	54.9	54.7	54.5
Fuel and lighting.....	71.7	71.3	71.3	71.9	72.8
Metals and metal products.....	80.0	80.1	80.1	80.3	79.9
Building materials.....	70.6	70.5	70.5	70.5	70.6
Chemicals and drugs.....	73.0	72.9	72.7	72.7	72.4
House-furnishing goods.....	74.6	74.1	72.4	72.5	72.5
Miscellaneous.....	64.5	64.1	63.9	63.9	63.9

Wholesale Price Trends During October, 1932

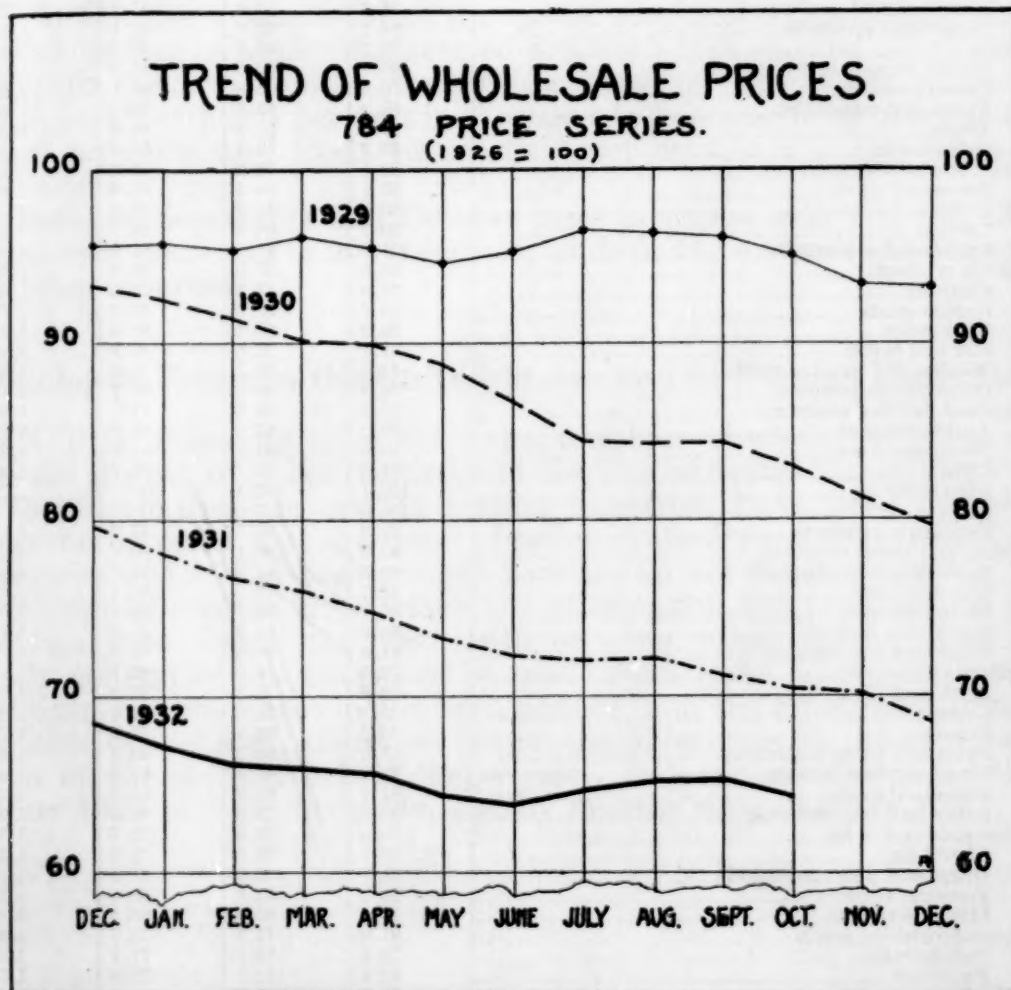
THE index number of wholesale commodity prices as computed by the Bureau of Labor Statistics of the United States Department of Labor shows a decrease from September, 1932, to October, 1932. This index number, which includes 784 commodities or price series weighted according to the importance of each commodity, and based on the average prices for the year 1926 as 100.0, averaged 64.4 for October as compared with 65.3 for September, showing a decrease of about 1½ per cent between the two months. When compared with October, 1931, with an index number of 70.3, a decrease of 8½ per cent has been recorded in the 12 months.

In the group of farm products decreases in the average prices of grains, livestock and poultry, oranges, peanuts, and white potatoes caused the group as a whole to decline 4½ per cent from the previous month. Increases were recorded in the average prices of eggs, lemons, hay, tobacco, and sweetpotatoes.

Among foods price decreases during the month were reported for butter, cheese, bread, rye and wheat flour, most meats, dressed poultry, coffee, lard, granulated sugar, and most vegetable oils. On the other hand, canned fruits, bananas, and raw sugar averaged higher

than in the month before. The group as a whole decreased 2 per cent in October when compared with September.

The hides and leather products group increased slightly more than three-fourths of 1 per cent during the month, due to increases in boots and shoes, skins, leather, and suitcases and bags. Decreases were shown in the average prices for hides. Textile products as a whole decreased $3\frac{1}{2}$ per cent from September to October, due to declining prices for cotton goods, silk and rayon, woolen and worsted goods, and other textile products. The subgroup of knit goods increased slightly.



In the group of fuel and lighting materials increases in the average prices of coal, gas, and petroleum products caused the group as a whole to advance nearly one-half of 1 per cent. Electricity declined during the month and coke remained at the September level.

Metals and metal products showed a slight upward tendency for October, due to increases in iron and steel products and plumbing and heating fixtures. Agricultural implements and nonferrous metals declined slightly while motor vehicles showed no change during the month. In the group of building materials, lumber, paint and paint materials, and other building materials moved upward and brick and tile, cement, and structural steel showed little or no change in average prices for the two months. The group as a whole advanced one-fourth of 1 per cent from September to October.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	October, 1931	September, 1932	October, 1932	Purchasing power of the dollar, October, 1932
All commodities	70.3	65.3	64.4	1.553
Farm products	58.8	49.1	46.9	2.132
Grains	44.3	37.4	34.4	2.907
Livestock and poultry	57.6	51.2	45.0	2.222
Other farm products	64.2	52.1	52.1	1.919
Foods	73.3	61.8	60.5	1.653
Butter, cheese, and milk	86.1	60.6	60.5	1.653
Cereal products	70.6	65.8	64.1	1.560
Fruits and vegetables	68.2	52.5	52.2	1.916
Meats	71.1	60.9	56.4	1.773
Other foods	69.7	64.6	65.4	1.529
Hides and leather products	82.5	72.2	72.8	1.374
Boots and shoes	93.1	84.4	84.6	1.182
Hides and skins	50.0	48.2	49.6	2.016
Leather	80.7	63.2	64.1	1.560
Other leather products	101.1	81.5	81.9	1.221
Textile products	63.0	57.0	55.0	1.818
Clothing	73.9	67.3	62.5	1.600
Cotton goods	59.7	57.9	56.2	1.779
Knit goods	59.2	50.4	50.9	1.965
Silk and rayon	41.7	32.6	30.8	3.247
Woolen and worsted goods	64.6	56.7	56.5	1.770
Other textile products	72.4	68.6	67.7	1.477
Fuel and lighting materials	67.8	70.8	71.1	1.406
Anthracite coal	94.2	87.7	88.7	1.127
Bituminous coal	83.6	81.1	81.1	1.233
Coke	81.5	76.7	76.7	1.304
Electricity	102.1	103.4	(1)	-----
Gas	100.8	107.6	(1)	-----
Petroleum products	39.2	46.7	47.4	2.110
Metals and metal products	82.8	80.1	80.3	1.245
Agricultural implements	85.6	84.9	84.7	1.181
Iron and steel	81.7	79.7	80.4	1.244
Motor vehicles	95.4	92.7	92.7	1.079
Nonferrous metals	54.9	51.6	50.7	1.972
Plumbing and heating	81.6	66.8	67.5	1.481
Building materials	76.1	70.5	70.7	1.414
Brick and tile	82.6	75.4	75.3	1.328
Cement	75.1	79.0	79.0	1.266
Lumber	65.2	56.3	56.6	1.767
Paint and paint materials	77.0	68.2	68.3	1.464
Plumbing and heating	81.6	66.8	67.5	1.481
Structural steel	81.7	81.7	81.7	1.224
Other building materials	82.0	79.9	80.0	1.250
Chemicals and drugs	75.6	72.9	72.7	1.376
Chemicals	79.7	79.8	79.8	1.253
Drugs and pharmaceuticals	61.6	56.6	55.9	1.789
Fertilizer materials	70.2	63.6	63.4	1.577
Mixed fertilizers	77.2	66.9	66.5	1.504
House-furnishing goods	81.0	73.7	73.7	1.357
Furnishings	79.8	74.7	74.7	1.339
Furniture	82.4	72.7	72.8	1.374
Miscellaneous	66.6	64.7	64.1	1.560
Automobile tires and tubes	46.0	42.7	44.6	2.242
Cattle feed	49.4	45.9	42.7	2.342
Paper and pulp	80.5	75.5	73.4	1.362
Rubber, crude	10.2	8.2	7.3	13.699
Other miscellaneous	86.9	83.2	82.1	1.218
Raw materials	61.5	56.2	54.6	1.832
Semimanufactured articles	65.2	60.7	60.7	1.647
Finished products	75.1	70.4	69.6	1.437
Nonagricultural commodities	72.6	68.7	68.1	1.468
All commodities other than farm products and foods	72.9	70.4	70.2	1.425

¹ Data not yet available.

Chemicals recorded minor price decreases between September and October. Drugs and pharmaceuticals, fertilizer materials, and mixed fertilizers showed recessions during October, causing the group to decline a little more than one fourth of 1 per cent from the month before. As a whole the house-furnishing goods group showed no change from the previous month.

The group of miscellaneous commodities decreased approximately 1 per cent between September and October, due to declining prices of cattle feed, paper and pulp, crude rubber, and other miscellaneous commodities. Automobile tires and tubes moved upward during the month.

The October averages for all the special groups of commodities, with the exception of semimanufactured articles which showed no change between the two months, were below those for September, ranging from one-fourth of 1 per cent in the case of all commodities other than farm products and foods to nearly 3 per cent in the case of raw materials.

Between September and October price increases took place in 133 instances, decreases in 204 instances, while in 447 instances no change in price occurred.

Wholesale Prices in the United States and in Foreign Countries

IN THE following table the index numbers of wholesale prices of the Bureau of Labor Statistics of the United States Department of Labor, and those in certain foreign countries, have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the original sources from which the information has been drawn, in certain cases being the year 1913 or some other pre-war period. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, and the kind and number of articles included, there are important differences in the composition of the index numbers themselves. Indexes are shown for the years 1926 to 1931, inclusive, and by months since January, 1931.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN FOREIGN COUNTRIES

Country.....	United States	Australia	Austria	Belgium	Bulgaria	Canada	Chile	China
Computing agency....	Bureau of Labor Statistics	Bureau of Census and Statistics	Federal Statistical Bureau	Ministry of Industry and Labor	General Statistical Bureau	Dominion Bureau of Statistics	General Statistical Bureau	National Tariff Commission, Shanghai
Base period.....	1926 (100)	1911 (1,000)	January-June, 1914 (100)	April, 1914 (100)	1926 (100)	1926 (100)	1913 (100)	1926 (100)
Commodities.....	784	92	(Gold) 47	(Paper) 126	(Gold) 55	502	(Paper)	155
1926.....	100.0	1,832	123	744	100.0	100.0	-----	100.0
1927.....	95.4	1,817	133	847	102.4	97.6	-----	104.4
1928.....	96.7	1,792	130	843	109.8	96.4	192.5	101.7
1929.....	95.3	1,803	130	851	117.0	95.6	192.4	104.5
1930.....	86.4	1,596	117	744	94.6	86.6	165.8	114.8
1931.....	73.0	1,428	109	626	79.1	72.2	152.2	126.4
1931								
January.....	78.2	1,454	105	661	83.6	76.7	149.7	119.7
February.....	76.8	1,448	107	658	80.6	76.0	152.2	127.4
March.....	76.0	1,456	107	660	79.1	75.1	155.7	126.1
April.....	74.8	1,447	108	652	79.5	74.5	159.2	126.2
May.....	73.2	1,440	107	640	78.9	73.0	160.0	127.5
June.....	72.1	1,425	110	642	78.7	72.2	158.6	129.2
July.....	72.0	1,428	114	635	79.7	71.7	154.0	127.4
August.....	72.1	1,399	110	616	77.4	70.9	150.1	130.3
September.....	71.2	1,391	108	597	77.1	70.0	146.2	129.2
October.....	70.3	1,402	109	591	78.7	70.4	140.8	126.9
November.....	70.2	1,428	112	584	78.9	70.6	148.6	124.8
December.....	68.6	1,425	112	573	77.5	70.3	150.9	121.8
1932								
January.....	67.3	1,414	114	557	75.7	69.4	146.1	119.3
February.....	66.3	1,449	112	554	75.9	69.2	151.9	-----
March.....	66.0	1,438	113	548	75.9	69.1	164.2	-----
April.....	65.5	1,431	112	539	72.4	68.4	189.8	116.7
May.....	64.4	1,408	116	526	71.7	67.7	213.6	115.7
June.....	63.9	1,390	115	514	71.7	66.6	226.6	113.6
July.....	64.5	1,397	112	512	69.2	66.6	230.2	111.8
August.....	65.2	1,415	112	524	-----	66.8	-----	111.3
September.....	65.3	-----	110	533	-----	66.9	-----	109.8

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN
FOREIGN COUNTRIES—Continued

Country.....	Czecho- slovakia	Den- mark	Finland	France	Ger- many	India	Italy	Japan
Computing agency...	Central Bureau of Sta- tistics	Statisti- cal De- part- ment	Central Bureau of Sta- tistics	General Statisti- cal Bu- reau	Federal Statisti- cal Bu- reau	Depart- ment, etc., ¹ Cal- cutta	Riccardo Bachi	Bank of Japan, Tokyo
Base period.....	July, 1914 (100)	1913 (100)	1926 (100)	1913 (100)	1913 (100)	July, 1914 (100)	1913 (100)	October, 1900 (100)
Commodities.....	(Gold) 69	118	120	126	400	(Paper) 72	(Paper) 140	56
1926.....	139. 2	163	100	695	134. 4	148	602. 0	236. 7
1927.....	143. 1	153	101	642	137. 6	148	495. 3	224. 6
1928.....	143. 1	153	102	645	140. 0	145	461. 6	226. 1
1929.....	135. 0	150	98	627	137. 2	141	445. 3	219. 8
1930.....	118. 6	130	90	554	124. 6	116	383. 0	181. 0
1931.....	107. 5	114	84	502	110. 9	96	-----	153. 0
1931								
January.....	110. 1	118	86	541	115. 2	98	341. 7	158. 5
February.....	108. 9	117	86	538	114. 0	99	338. 1	158. 0
March.....	108. 8	116	86	539	113. 9	100	339. 3	158. 3
April.....	110. 5	115	85	540	113. 7	98	337. 0	157. 9
May.....	110. 3	113	84	520	113. 3	97	331. 7	154. 0
June.....	108. 7	110	83	518	112. 3	93	326. 5	150. 7
July.....	112. 1	110	82	500	111. 7	93	324. 3	152. 8
August.....	107. 8	109	81	488	110. 2	92	321. 6	151. 8
September.....	105. 1	109	79	473	108. 6	91	319. 1	149. 6
October.....	104. 6	113	82	457	107. 1	96	322. 2	146. 9
November.....	104. 3	117	87	447	106. 6	97	320. 4	147. 0
December.....	103. 8	119	92	442	103. 7	98	318. 9	151. 0
1932								
January.....	102. 3	118	94	439	100. 0	97	316. 6	159. 5
February.....	101. 4	119	93	446	99. 8	97	314. 4	161. 4
March.....	101. 4	117	92	444	99. 8	94	315. 0	158. 5
April.....	100. 7	115	89	439	98. 4	92	311. 3	154. 1
May.....	99. 5	114	88	438	97. 2	89	305. 1	150. 3
June.....	97. 3	113	87	425	96. 2	86	297. 4	146. 4
July.....	98. 0	115	89	430	95. 9	87	295. 7	147. 7
August.....	97. 9	117	89	415	95. 4	91	-----	155. 8
September.....	100. 1	119	-----	413	95. 1	-----	-----	167. 4

¹ Department of Commercial Intelligence and Statistics.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN FOREIGN COUNTRIES—Continued

Country.....	Jugo- slavia	Nether- lands	New Zealand revised	Nor- way	Poland	South Africa	Spain	Sweden	Swit- zerland	United King- dom
Computing agency..	National Bank	Central Bureau of Sta- tistics	Census and Statist- ics Office	Central Bureau of Sta- tistics	Central Office of Sta- tistics	Office of Cen- sus and Statist- ics	Bureau of La- bor Sta- tistics	Board of Trade	Federal Labor Depart- ment	Board of Trade
Base period.....	1926 (100)	1913 (100)	1909-13 (1,000)	1913 (100)	1927 (100)	1910 (1,000)	1913 (100)	1913 (100)	July, 1914 (100)	1924 (100)
Commodities.....	55	48	180	95	-----	188	74	160	121	150
1926.....	100.0	145	1553	-----	88.7	1387	181	149	144.5	89.1
1927.....	103.4	148	1478	-----	100.0	1395	172	146	142.2	85.2
1928.....	106.2	149	1492	157	101.0	1354	167	148	144.6	84.4
1929.....	100.6	142	1488	149	95.7	1305	171	140	141.2	82.1
1930.....	86.6	117	1449	137	82.3	1155	172	122	126.5	71.9
1931.....	72.9	97	1336	122	70.5	1119	174	111	109.7	62.6
1931										
January.....	75.7	105	-----	128	71.6	1148	173	115	115.2	64.3
February.....	74.8	104	-----	126	72.1	-----	175	114	114.7	63.9
March.....	74.6	103	-----	124	72.5	-----	174	113	113.6	63.7
April.....	75.5	102	-----	123	74.1	1115	172	112	112.2	63.6
May.....	75.4	102	-----	121	74.8	-----	169	111	110.8	62.8
June.....	73.8	100	1334	120	73.2	-----	169	110	110.4	62.1
July.....	74.4	97	1319	120	70.3	1104	175	110	109.5	61.5
August.....	73.6	94	1323	120	69.0	-----	177	109	108.1	59.9
September.....	71.6	91	1323	117	67.0	-----	178	107	106.3	59.7
October.....	69.5	89	1327	119	66.3	1109	175	108	106.4	62.8
November.....	68.6	89	1335	119	68.2	-----	176	110	106.2	64.0
December.....	67.2	85	1333	122	66.4	-----	177	111	103.1	63.7
1932										
January.....	67.8	84	1335	123	63.9	1083	176	109	101.4	63.7
February.....	67.3	83	1321	123	64.6	-----	178	110	99.6	63.4
March.....	67.8	82	1316	122	63.8	-----	180	109	98.7	63.0
April.....	66.1	80	1307	120	65.3	1062	181	109	97.7	61.6
May.....	65.4	79	1304	120	66.1	-----	177	109	95.6	60.6
June.....	64.9	78	1299	120	61.8	-----	174	108	94.5	59.0
July.....	65.6	76	1299	122	60.4	1002	172	108	93.6	58.8
August.....	62.6	75	1299	123	60.2	-----	171	108	95.0	59.9
September.....	61.8	-----	-----	123	60.0	-----	170	110	-----	61.4

IMMIGRATION AND EMIGRATION

Statistics of Immigration for September, 1932

By J. J. KUNNA, CHIEF STATISTICIAN, UNITED STATES BUREAU OF IMMIGRATION

THERE were 3,129 immigrant aliens admitted to the United States during September, 1932, as compared with 5,017 for the corresponding month of last year and 17,792 for September, 1930, a drop of 38 per cent since a year ago and of 82 per cent since two years ago. Europe supplied 1,624 of the September, 1932, immigrants, of whom one-fourth (419) came from Italy; Germany was second in the list with 247, followed by Poland with 186, and Great Britain with 156. Canada contributed 906, Mexico 205, and other countries 394. In September of last year, 2,711 immigrants were admitted from European countries, 448 coming from Italy, 421 from Germany, 392 from Great Britain, and 186 from Poland; Canada sent 1,142, Mexico 258, and other countries 906.

Over two-thirds of the newcomers for permanent residence admitted during September last were women and children. The female immigrants numbered 1,866 and the male 1,263. Of the females, 758 were single, 939 married, 155 widowed, and 14 divorced; 298 were children under 16 years of age, while 281 ranged in age from 16 to 21 years, 532 from 22 to 29 years, 297 from 30 to 37 years, 131 from 38 to 44 years, and 327 from 45 to 60 years and over. Among the males, the single numbered 787, married 446, widowers 27, and divorced 3; 251 were under 16 years of age, 262 were from 16 to 21 years, 336 from 22 to 29 years, 197 from 30 to 37 years, 75 from 38 to 44 years, and 142 were 45 years of age and over. Over 82 per cent of these immigrants were women, others under 22 years of age, and male adults over 44 years of age. The females outnumbered the males by about 7 to 5.

During September last about 8 alien residents of the United States left for intended future permanent residence in a foreign country for every 3 immigrants admitted, 8,856 emigrants having departed during this month. Of those departing permanently, 6,271 went to Europe, 1,205 to Mexico, 558 to Asia, and 822 to other countries; 5,777 were males and 3,079 females. About 40 per cent of these emigrants last resided in the State of New York.

Aliens formally deported in September, 1932, numbered 1,645, making a total of 5,691 for the first quarter of the current fiscal year, as compared with 4,711 for the corresponding period of last year, an increase of 980, or 21 per cent. Of the September deportees, 1,453 were returned whence they came at Government expense and 105 at the expense of steamship companies bringing them to our shores, while the remaining 87 paid their own passage or departed in compliance with the order of deportation. In the same month 306 indigent aliens were returned to their native land at their own request. The monthly

average number of such removals so far this year was 190, as against 220 per month during the past fiscal year.

Altogether, 53,916 aliens of all classes were admitted under the amended immigration act of 1924 during the three months from July through September, 1932. Nearly one-half (26,034) of these arrivals were residents of the United States returning from a temporary sojourn in a foreign country; 11,759 were temporary visitors for business or pleasure, 6,213 were in continuous passage through the United States on their way elsewhere, 1,167 were Government officials, their families, etc., and 592 were students. The three principal classes admitted for permanent residence or immigrants included 2,860 natives of nonquota countries, 2,788 quota aliens, and 1,983 husbands, wives, and unmarried children of American citizens. Of the total, 38,613 were born in Europe, 10,682 in Canada, Mexico, and other America, 3,708 in Asia, and 913 in Africa, Australia, and other countries.

INWARD AND OUTWARD PASSENGER MOVEMENT DURING JULY, AUGUST, AND SEPTEMBER, 1932

Period	Inward					Aliens de- barred from enter- ing ¹	Outward					Aliens de- ported after land- ing ²
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens de- parted	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant	Non- emi- grant	Total			
July, 1932.....	2,079	10,534	12,613	28,006	40,619	561	11,328	24,089	35,417	59,298	94,715	2,100
August, 1932.....	2,719	14,107	16,826	54,070	70,896	605	8,783	20,141	28,924	57,887	86,811	1,946
September, 1932.....	3,129	21,348	24,477	60,258	84,735	596	8,856	17,290	26,146	38,368	64,514	1,645
Total..	7,927	45,989	53,916	142,334	196,250	1,762	28,967	61,520	90,487	155,553	246,040	5,691

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens (exclusive of visitors across land borders) are included among aliens departed, they having entered the United States, legally or illegally, and later deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

IOWA.—Bureau of Mines. *Report for the biennial period ending December 31, 1931. Des Moines, 1932. 45 pp.*

General statistics on the coal-mining industry of the State, covering accidents, production, employment, distribution, etc. The data on accidents show a reduction in fatal injuries per million man-hours worked from 2.01 in 1930 to 1.16 in 1931.

MASSACHUSETTS.—Department of Labor and Industries. *Annual report, for the year ending November 30, 1931. Boston [1932]. 161 pp., charts. (Public document No. 104.)*

MILWAUKEE (WISCONSIN).—Citizens' Committee on Unemployment and the Public Employment Office. *Twentieth annual report, July 1, 1931, to June 30, 1932. [Milwaukee], 1932. 23 pp.*

NEVADA.—Inspector of Mines. *Report for the period December 1, 1930, to June 30, 1932, inclusive. Carson City, 1932. 48 pp.*

Includes data on production and on fatal and nonfatal accidents in the mines.

PENNSYLVANIA.—Department of Mines. *Report, 1929-30, Part II: Bituminous. Harrisburg, 1932. 747 pp.*

The report covers in detail the operations in the 30 bituminous districts of the State, as reported by the mine inspectors, and gives statistics of accidents, number of employees, and days worked.

WEST VIRGINIA.—Department of Mines. *Eleventh annual report, 1930. Charleston [1931?] 199 pp.*

Contains a directory of mines, with statistics on condition of the mines, production and distribution of coal and coke, and employment and accidents in the industry, in West Virginia.

WISCONSIN.—Board of Health. Bureau of Plumbing and Domestic Sanitary Engineering. *Wisconsin State plumbing code: Rules and regulations of the Wisconsin State Board of Health governing the construction, installation, and inspection of plumbing and drainage, and the licensing of plumbers and supervision of apprentices. Sixth edition. Madison, 1932. 266 pp.; diagrams, illus.*

UNITED STATES.—Board of Actuaries of the Civil Service Retirement and Disability Fund. *Eleventh annual report. Washington, 1932. 15 pp. (House Doc. No. 342, 72d Cong., 1st sess.)*

— Department of Commerce. Bureau of Foreign and Domestic Commerce. *Commerce yearbook, 1932. Vol. I—United States. Washington, 1932. 602 pp., charts.*

Includes statistics of employment, unemployment, wages, immigration, and wholesale and retail prices.

— Bureau of Mines. *Bulletin 355: Coal-mine accidents in the United States, 1930, by W. W. Adams, L. E. Geyer, and L. Chenoweth. Washington, 1932. 112 pp.*

Reviewed in this issue.

— Information Circular 6645: *Physiological factors in mine ventilation in 1931, by R. R. Sayers. Washington, 1932. 66 pp.*

A summary of recent literature concerning effects on workers of exposure to injurious dusts, toxic or noxious gases, and abnormal temperatures or humidities.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Technical Paper 515: Safety organizations at Lake Superior iron mines, by F. S. Crawford.* Washington, 1932. 32 pp.

— Bureau of the Census. *Fifteenth Census of the United States, 1930: Occupation statistics—United States summary.* Washington, 1932. 105 pp.
Statistics from this publication are given in this issue.

— Department of Labor. Women's Bureau. *Bulletin No. 98: Labor laws for women in the States and Territories, by Florence P. Smith.* Washington, 1932. 67 pp., charts.

A revision of Bulletin No. 63, bringing the legislation for women up to December 31, 1931. Includes the laws relating to hours, rest periods, night work, prohibited or regulated occupations, seating, minimum wage, and home work. Twelve charts give a comparative view of the situation of the different States in regard to special legislation for women.

— Government Printing Office. *Labor: Child labor, women, employment, wages, workmen's insurance, and compensation. List of publications relating to above subjects for sale by Superintendent of Documents, Washington, D. C.* Washington, 1932. 35 pp. (Price list 33, July, 1932.)

— Interstate Commerce Commission. Bureau of Statistics. *Accident Bulletin No. 100: Collisions, derailments, and other accidents resulting in injury to persons, equipment or roadbed, arising from the operation of steam railways in interstate commerce, calendar year 1931.* Washington, 1932. 110 pp.; charts.

The preliminary summary of this report was reviewed in the Monthly Labor Review for May, 1932.

— Navy Department. Secretary's Office. Navy Yard Division. *Safety standards for the protection of the head, eyes, and respiratory organs.* Washington, 1932. 49 pp., diagrams, illus. (Revised edition.)

Standards developed from the experience of qualified authorities and as the result of investigations at the material laboratory of the navy yard, New York, and superseding the 1924 standards. Specifications are given for the different types of goggles, for helmets and hand shields, and for dust respirators, with notes on protection against lead fumes.

— White House Conference on Child Health and Protection. Committee on Medical Care of Children. *Hospitals and child health.* New York, Century Co., 1932. 279 pp.

This volume contains the reports of the subcommittees on hospitals and dispensaries, convalescent care, and medical social service.

Official—Foreign Countries

BENGAL (INDIA).—Chief Inspector of Factories. *Annual report on the administration of the Indian factories act in Bengal, for the year 1931.* Calcutta, 1932. 84 pp.

Data on wages and hours of labor in the jute industry of Bengal, taken from the above report, are given in this issue.

CANADA.—Department of Labor. *Report for the fiscal year ending March 31, 1932.* Ottawa, 1932. 205 pp., charts.

Reviews the operation of the industrial disputes investigation act and of the Government annuities act, the fair wages policy, conciliation work, old-age pensions, labor legislation, strikes and lockouts, fatal industrial accidents, the work of the employment service, unemployment relief, cooperative societies, and other activities of interest to labor.

DENMARK.—Invalidforsikringsraadet. *Beretning for aaret 1931.* Copenhagen, 1932. 197 pp., charts.

Annual report on public invalidity and old-age insurance in Denmark for the fiscal year 1931, including relief extended, decisions concerning the right to benefit, health restoration measures, employment of invalids, control of benefit payments, etc.

FRANCE.—Bureau de la Statistique Générale. *Statistique annuelle des institutions d'assistance, 1929. Paris, 1932. lxi, 71 pp.*

Statistics of the assistance given in France in 1929 to the aged and permanently incapacitated, the hospital and medical care of the sick, maternity and infant care, and care of the insane.

— Commission Supérieure de la Caisse Nationale des Retraites pour la Vieillesse. *Rapport sur les opérations et la situation de cette caisse, 1930. Paris, 1932. 114 pp.*

The annual report of the French national old-age retirement fund for the year 1930.

GERMANY.—Statistisches Reichsamt. *Statistisches Jahrbuch für das Deutsche Reich, 1932. Berlin, 1932. [Various paging.]*

The subjects covered include production, employment, wages, prices, social insurance, and consumers' cooperation.

GREAT BRITAIN.—Home Office. *Memorandum on the workmen's compensation acts, 1925-1931. London, 1932. 23 pp.*

A brief explanation of the main provisions of the workmen's compensation act of 1925, as amended to date.

— India Office. *Statement exhibiting the moral and material progress and condition of India during the year 1930-31. London, 1932. 752 pp., maps, charts, illus.*

Presents a general survey of the Indian situation, and a detailed consideration of commerce, finance, health, and education, the advancement of science, communications, and the like.

— Ministry of Agriculture and Fisheries and Ministry of Health. Interdepartmental Committee on Agricultural Tied Cottages. *Report. London, 1932. 33 pp. (Cmd. 4148.)*

GREATER SHANGHAI (CHINA).—Bureau of Social Affairs. *The cost of living index numbers of laborers, Greater Shanghai, January, 1926-December, 1931. Shanghai, 1932. [Various paging.]*

Based on a budgetary investigation of 305 working families and the retail prices of commodities.

HAMBURG (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch für die Freie und Hansestadt Hamburg, 1931-32. Hamburg, 1932. 286 pp., maps.*

The subjects covered in this statistical yearbook for Hamburg, Germany, for the fiscal year 1931-32, include housing, cost of living, agreement wages, employment service, social insurance, arbitration and conciliation of industrial disputes, hours of labor, etc.

INTERNATIONAL LABOR OFFICE.—*Studies and reports, Series N, No. 15: Pneumoconiosis—a list of references. Geneva, 1932. 76 pp. (World Peace Foundation, Boston, Mass., American Agent.)*

ITALY.—Istituto Centrale di Statistica. *Annuario statistico Italiano, 1932. Rome, 1932. 642 pp., maps, charts.*

Includes data on prices, wages, and production.

NETHERLANDS.—Centraal Bureau voor de Statistiek. *Jaarverslag over het jaar 1931. The Hague, 1932. 36 pp.*

Contains information on the activities of the Central Bureau of Statistics in the Netherlands during 1931.

— Centrale Commissie voor de Statistiek. *Jaarverslag over het jaar 1931: The Hague, 1932. 27 pp.*

A report on the organization, personnel, and activities of the Dutch Central Statistical Commission during the year of 1931, including data on labor conditions in the Netherlands.

NETHERLANDS.—Rijksverzekeringsbank. *Ongevallenstatistiek, 1930. Deel I. Amsterdam, 1932. 257 pp.*

Contains statistics on industrial accidents (including those in agriculture) in the Netherlands in the year 1930, compensated under the accident insurance laws of 1921 and 1922, by localities, industries, trades, and occupations, and by duration and severity of injuries.

— — — *Wetenschappelijke balans van de vrijwillige ouderdomsverzekering op 31 December 1929. Amsterdam [1931?]. 112 pp.*

Contains a report of the state insurance bank on the financial transactions of the voluntary old-age insurance system in the Netherlands up to December 1, 1929.

NEW SOUTH WALES (AUSTRALIA).—Bureau of Statistics. *Official year book of New South Wales, 1930-31. Sydney, 1932. 803 pp.*

Includes information on employment, unemployment and its relief, wages and hours, production, prices, trade-unions, old-age and invalidity pensions, family allowances, industrial accidents, and workmen's compensation, etc. Some of the data on family allowances are given in this issue of the Monthly Labor Review.

NEW ZEALAND.—National Provident Fund. *Twenty-first annual report of the board, for the year ended December 31, 1931. Wellington, 1932. 4 pp.*

Data on the income and expenditures of the fund, taken from this report, are given in this issue of the Monthly Labor Review.

ONTARIO (CANADA).—Department of Public Welfare. *First annual report, 1930-1931. Toronto, 1932. 81 pp.*

The new provincial department of public welfare, organized in 1930, includes the following agencies the reports of which are contained in the above publication: Mothers' allowances commission, old-age pensions commission, soldiers' aid commission, children's aid branch, industrial schools, Ontario training schools, houses of refuge, and orphanages.

OSLO (NORWAY).—Trygdekasse. *Årsberetning, 1931. Oslo, 1932. 55 pp.*

Annual report on the operation of the insurance funds of the city of Oslo, Norway, during the fiscal year 1931. Sickness and mortality statistics are included.

SWEDEN.—Statistiska Centralbyrån. *Statistisk årsbok, 1932. Stockholm, 1932. 410 pp.*

Statistical yearbook for Sweden for 1932. Includes data on public health, prices and cost of living, cooperation, housing, employment and unemployment, employment service, wages in both manufacturing and agriculture, industrial disputes, etc.

SWITZERLAND.—Eidg. Volkswirtschaftsdepartement. Bundesamt für Industrie, Gewerbe, und Arbeit. *Ergebnisse der schweizerischen Sozialstatistik 1931. Bern, 1932. 215 pp.*

Contains statistical information for Switzerland, up to the end of 1931, on employment and unemployment, unemployment-insurance funds, employment service, migration, wages, industrial disputes, trade agreements, etc.

Unofficial

AMERICAN ASSOCIATION OF PUBLIC WELFARE OFFICIALS. *Suggestions for dealing with unemployment emergencies in smaller communities. Chicago, 850 East Fifty-eighth Street, 1931. 9 pp.*

In addition to a brief summary of methods of providing unemployment relief, sample forms for the keeping of records are given.

AMERICAN ASSOCIATION OF SOCIAL WORKERS. Boston Chapter. *A census of social-work positions in Massachusetts, 1932. [Boston] 1932. 31 pp.*

Data collected in this census include age; marital status; position held, full or part time; college training; diploma or certificate from social-work school; and length of service in professional social work.

ARMSTRONG, BARBARA N. *Insuring the essentials: Minimum wage plus social insurance—a living wage program.* New York, Macmillan Co., 1932. 717 pp., charts.

A comprehensive study of social-insurance legislation in the United States and other countries, covering the minimum wage, workmen's compensation, sickness insurance, old-age and invalidity insurance and old-age pensions, survivors' insurance, and unemployment insurance.

CASUALTY ACTUARIAL SOCIETY. *Proceedings, May 20, 1932. Vol. XVIII, part II, pp. 253-531.* New York, 90 John Street, 1932. Charts, illus.

The papers read or presented at this semiannual (thirty-eighth regular) meeting of the society, held at Hartford, Conn., included one on the attitude of the courts in construing the workmen's compensation act.

COMMITTEE ON THE COSTS OF MEDICAL CARE. *Publication No. 18: The medical service of the Homestake Mining Co., by Louis S. Reed.* Chicago, University of Chicago Press, 1932. 54 pp.

DEUTSCHE GESELLSCHAFT FÜR GEWERBEHYGIENE. *Schriften, Heft 38: Die Unfall- und Gesundheitsgefahren in der Steinkohlenteerdestillation, von H. Leymann.* Berlin, 1932. 34 pp., diagrams.

Contains a report on accidents and health hazards in the work of coal-tar distillation, as well as proposed measures for protection against these accidents and hazards.

— *Schriften, Heft 39. Gewerbestaub und Lungentuberkulose. Dritter Teil, von K. W. Jötten.* Berlin, 1932. 169 pp., illus.

Deals with industrial dusts and pulmonary tuberculosis, including measures for prevention of diseases resulting from dust inhalation.

— *Schriften, Heft 40. Die Beiz-, Lackier- und Polierverfahren für Holz, von J. Wenzel.* Berlin, 1932. 44 pp.

Treats of health hazards in the bleaching, varnishing, and polishing of wood, and of measures for prevention of these hazards.

— *Schriften, Heft 41. Die Staubbeseitigung und Geräuschbekämpfung in Schotterbetrieben, von O. Wittgen.* Berlin, 1932. 56 pp., diagrams, illus.

Describes health hazards from dust and smoke in stone-crushing establishments, and gives methods of combating such hazards.

— *Schriften, Heft 42. Praktische Fragen aus dem Gebiete des Augenzitterns der Bergleute, von J. Ohm.* Berlin, 1932. 63 pp., charts.

Describes practical problems connected with miners' nystagmus, including measures for protection against this malady.

[EMERGENCY PLANNING AND RESEARCH BUREAU (INC.)] *An appraisal and a citation for distinguished service for their community by the engineering and architectural societies of Boston.* Boston, 182 Tremont Street, 1932. 19 pp.

Reviewed in this issue.

GEWERKSCHAFTSBUND DER ANGESTELLTEN. *Die wirtschaftliche und soziale Lage der Angestellten. Vollständige erweiterte Ausgabe.* Berlin, Sieben-Stäbe-Verlag, 1931. 334 pp., maps, charts.

A report on the economic and social condition of salaried employees in Germany, including information on salaries, hours of labor, housing, cost of living, education, recreation, etc.

GIESE, FRITZ, AND CORDEMANN, CLÄRE. *Psychologische Beobachtungstechnik bei Arbeitsproben.* Halle a. S., Carl Marhold Verlagsbuchhandlung, 1931: 82 pp., diagrams. (*Deutsche Psychologie, Band VII, Heft 3.*)

Deals with the technic of psychological observations in labor surveys by individuals and groups, including methods of investigation of women's skill in handwork.

HERBST, ALMA. *The Negro in the slaughtering and meat-packing industry in Chicago.* Boston and New York, Houghton Mifflin Co., 1932. 182 pp., diagrams. (*Hart, Schaffner & Marx Prize Essays, LII.*)

ICHIHASHI, YAMATO. *Japanese in the United States: A critical study of the problems of the Japanese immigrants and their children.* Stanford University, Calif., Stanford University Press, 1932. 426 pp.

INDUSTRIAL ACCIDENT PREVENTION ASSOCIATIONS [of Ontario, Canada]. *Digest of the 1932 safety convention and annual general meeting, held at Toronto, April 21 and 22, 1932.* Toronto, 1932. 113 pp.; illus.

JACKS, LAWRENCE PEARSALL. *Education through recreation.* New York, Harper & Bros., 1932. 155 pp., illus.

This volume contains a summary of the addresses of the writer during a six months' tour of this country. His theme is the necessity of training for the wise use of the leisure time which we already have and that which the increasing mechanization of industry is sure to bring us.

LOVEJOY, OWEN R. *The Negro children of New York.* New York, Children's Aid Society, 1932. 49 pp., illus.

The chief needs of the Negro children of New York City, the author holds, are education, economic security, health, and recreation. Taking these up in turn, he finds that, in New York, Negro children have the same educational opportunities as those of other races, and that they are taking advantage of them in about the same proportion. Their economic security depends upon their family position, and here they are at a grave disadvantage, owing to the general discrimination against the race in the better-paid occupations. In opportunities for employment, in housing possibilities, and in general economic well-being, their race belongs to the underprivileged classes, and the children suffer accordingly. As a natural consequence, their health level is lower than that of white children, and there is need of much work to provide special health centers, hygienic housing conditions, and the like. Their recreation needs also are poorly met.

MAZZONI, GIULIANO. *Il contratto collettivo di lavoro nella legislazione internazionale.* Florence, Poligrafica Universitaria, 1930. 124 pp.

Deals with collective agreements according to international legislation, including character and contents of collective labor contracts, the employers' and employees' sides in these contracts, and their effectiveness in various countries.

METROPOLITAN LIFE INSURANCE CO. Policyholders' Service Bureau. *Foremen's safety conferences.* New York, 1 Madison Avenue [1932?]. 21 pp.

A program for a series of seven safety conferences, each for the discussion of one main phase of accident-prevention work. The material, which has been developed from programs used by a number of industrial organizations, is confined to the fundamental principles of safety work as applied to all types of industry.

NATIONAL METAL TRADES ASSOCIATION. Committee on Industrial Relations. *Stabilizing metal trades employment.* Chicago, 122 South Michigan Avenue, 1931. 30 pp., charts.

NATIONAL SAFETY NEWS. *Buyer's guide of safety equipment, 1930 edition.* Chicago, 20 North Wacker Drive [1930?]. 68 pp.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS (INC.). *Publication 97: Illumination and eyesight in industry, by Le Grand H. Hardy.* New York, 450 Seventh Avenue, 1932. 12 pp. (Reprinted from the *Sight Saving Review*, June, 1932.)

A review of the relation of illumination in industry to defective eyesight and accidents.

OREGON, UNIVERSITY OF. School of Business Administration. Bureau of Business Research. *Studies in Business No. 12: Wage payment plans used by Oregon manufacturers, by Clausin D. Hadley.* Eugene, Oreg., 1932. 32 pp.

PENNSYLVANIA, UNIVERSITY OF. Wharton School of Finance and Commerce. Industrial Research Department. *Research Studies XX: The Philadelphia upholstery weaving industry; a case study of a declining industry in an old manufacturing center.* Philadelphia, 1932. 231 pp., chart.

Reviewed in this issue.

PROSPECT UNION EDUCATIONAL EXCHANGE. *Educational opportunities of Greater Boston for working men and women. Catalogue No. 10, 1932-1933: A selective list of day and evening classes and home study courses for adults.* Cambridge, 678 Massachusetts Avenue, 1932. 162 pp.

PURDUE UNIVERSITY. *Engineering Bulletin, Vol. XV, No. 1: A report of foremanship conferences; seven years' service to the industries of Indiana, 1923 to 1930.* By G. F. Buxton. Lafayette, Ind., 1931. 61 pp., map, illus.

ROWLEY, F. W. *The industrial situation in New Zealand: The industrial arbitration act, and the present economic position; solution of unemployment, and other matters.* Wellington, New Zealand, Harry H. Tombs (Ltd.), 1931. 178 pp.

RUSSELL SAGE FOUNDATION. *The incidence of work shortage: Report of a survey by sample of families made in New Haven, in May-June, 1931, by Margaret H. Hogg.* New York, 1932. 136 pp., map, charts.

SCHIEPP, J. *Das Recht auf Arbeit oder Unterhalt.* [No place, no date.] 26 pp.

A lecture dealing with the question of the right to work or to living at public cost, from the point of view of the German Federal Constitution and legislation.

TEXAS, UNIVERSITY OF. *Bulletin No. 3134, Bureau of Research in the Social Sciences Study No. 3: The labor of women in the production of cotton, by Ruth Allen.* Austin, 1931. 285 pp., illus.

TWO UNEMPLOYMENT INSURANCE DEBATES. *Resolved: That the several States should enact legislation providing for compulsory unemployment insurance.* New York, Noble & Noble, 1931. 106 pp.

Published weekly, except during the months of December and January, when it is published bi-weekly. The subscription price is \$5.00 per annum in advance. Single copies are sold at 15 cents.

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LIST OF BULLETINS OF THE BUREAU OF LABOR STATISTICS

The following is a list of all bulletins of the Bureau of Labor Statistics published since July, 1912, except that in the case of bulletins giving the results of periodic surveys of the bureau only the latest bulletin on any one subject is here listed.

A complete list of the reports and bulletins issued prior to July, 1912, as well as the bulletins published since that date, will be furnished on application. Bulletins marked thus () are out of print.*

Conciliation and arbitration (including strikes and lockouts).

- *No. 124. Conciliation and arbitration in the building trades of Greater New York. [1913.]
- *No. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. [1913.]
- *No. 139. Michigan copper district strike. [1914.]
- *No. 144. Industrial court of the cloak, suit, and skirt industry of New York City. [1914.]
- *No. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. [1914.]
- No. 191. Collective bargaining in the anthracite-coal industry. [1916.]
- *No. 198. Collective agreements in the men's clothing industry. [1916.]
- No. 233. Operation of the industrial disputes investigation act of Canada. [1918.]
- No. 255. Joint industrial councils in Great Britain. [1919.]
- No. 283. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 287. National War Labor Board: History of its formation, activities, etc. [1921.]
- *No. 303. Use of Federal power in settlement of railway labor disputes. [1922.]
- No. 341. Trade agreement in the silk-ribbon industry of New York City. [1923.]
- No. 402. Collective bargaining by actors. [1926.]
- No. 468. Trade agreements, 1927.
- No. 481. Joint industrial control in the book and job printing industry. [1928.]

Cooperation.

- No. 313. Consumers' cooperative societies in the United States in 1920.
- No. 314. Cooperative credit societies (credit unions) in America and in foreign countries. [1922.]
- No. 437. Cooperative movement in the United States in 1925 (other than agricultural).
- No. 531. Consumers', credit, and productive cooperative societies, 1929.

Employment and unemployment.

- *No. 109. Statistics of unemployment and the work of employment offices. [1913.]
- *No. 172. Unemployment in New York City, N. Y. [1915.]
- *No. 183. Regularity of employment in the women's ready-to-wear garment industries. [1915.]
- *No. 195. Unemployment in the United States. [1916.]
- *No. 196. Proceedings of Employment Managers' Conference, held in Minneapolis, Minn., January 19 and 20, 1916.
- *No. 202. Proceedings of the conference of Employment Managers' Association of Boston, Mass., held May 10, 1916.
- No. 206. The British system of labor exchanges. [1916.]
- *No. 227. Proceedings of Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- *No. 235. Employment system of the Lake Carriers' Association. [1918.]
- *No. 241. Public employment offices in the United States. [1918.]
- *No. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.
- *No. 310. Industrial unemployment: A statistical study of its extent and causes. [1922.]
- No. 409. Unemployment in Columbus, Ohio, 1921 to 1925.
- No. 542. Report of the Advisory Committee on Employment Statistics. [1931.]
- No. 544. Unemployment-benefit plans in the United States and unemployment insurance in foreign countries. [1931.]
- *No. 553. Fluctuation in employment in Ohio, 1914 to 1929.
- No. 555. Social and economic character of unemployment in Philadelphia, April, 1930.

Foreign labor laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]
- No. 494. Labor legislation of Uruguay. [1929.]
- No. 510. Labor legislation of Argentina. [1930.]
- No. 529. Workmen's compensation legislation of the Latin American countries. [1930.]
- No. 549. Labor legislation of Venezuela. [1931.]
- No. 554. Labor legislation of Paraguay. [1931.]
- No. 559. Labor legislation of Ecuador. [1931.]
- No. 569. Labor legislation of Mexico. [1932.]

Housing.

- *No. 158. Government aid to home owning and housing of working people in foreign countries. [1914.]
- No. 263. Housing by employers in the United States. [1920.]
- No. 295. Building operations in representative cities, 1920.
- No. 545. Building permits in principal cities of the United States in [1921 to] 1930.

Industrial accidents and hygiene.

- *No. 104. Lead poisoning in potteries, tile works, and porcelain-enameled sanitary ware factories. [1912.]
- No. 120. Hygiene of the painters' trade. [1913.]
- *No. 127. Dangers to workers from dusts and fumes, and methods of protection. [1913.]
- *No. 141. Lead poisoning in the smelting and refining of lead. [1914.]
- *No. 157. Industrial accident statistics. [1915.]
- *No. 165. Lead poisoning in the manufacture of storage batteries. [1914.]
- *No. 179. Industrial poisons used in the rubber industry. [1915.]
- No. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings. [1916.]
- *No. 201. Report of the committee on statistics and compensation insurance costs of the International Association of Industrial Accident Boards and Commissions. [1916.]
- No. 209. Hygiene of the printing trades. [1917.]
- *No. 219. Industrial poisons used or produced in the manufacture of explosives. [1917.]
- No. 221. Hours, fatigue, and health in British munition factories. [1917.]
- No. 230. Industrial efficiency and fatigue in British munition factories. [1917.]
- *No. 231. Mortality from respiratory diseases in dusty trades (inorganic dusts). [1918.]
- *No. 234. The safety movement in the iron and steel industry, 1907 to 1917.
- No. 236. Effects of the air hammer on the hands of stonecutters. [1918.]
- *No. 249. Industrial health and efficiency. Final report of British Health of Munitions Workers' Committee. [1919.]
- *No. 251. Preventable death in the cotton-manufacturing industry. [1919.]
- No. 256. Accidents and accident prevention in machine building. [1919.]
- No. 267. Anthrax as an occupational disease. [1920.]
- No. 276. Standardization of industrial accident statistics. [1920.]
- *No. 280. Industrial poisoning in making coal-tar dyes and dye intermediates. [1921.]
- *No. 291. Carbon monoxide poisoning. [1921.]
- No. 293. The problem of dust phthisis in the granite-stone industry. [1922.]
- No. 298. Causes and prevention of accidents in the iron and steel industry, 1910-1919.
- No. 306. Occupation hazards and diagnostic signs: A guide to impairments to be looked for in hazardous occupations. [1922.]
- No. 392. Survey of hygienic conditions in the printing trades. [1925.]
- No. 405. Phosphorus necrosis in the manufacture of fireworks and in the preparation of phosphorus. [1926.]
- No. 427. Health survey of the printing trades, 1922 to 1925.
- No. 428. Proceedings of the Industrial Accident Prevention Conference, held at Washington, D. C., July 14-16, 1926.
- No. 460. A new test for industrial lead poisoning. [1928.]
- No. 466. Settlement for accidents to American seamen. [1928.]
- No. 488. Deaths from lead poisoning, 1925-1927.
- No. 490. Statistics of industrial accidents in the United States to the end of 1927.
- No. 507. Causes of death, by occupation. [1930.]

Industrial relations and labor conditions.

- No. 237. Industrial unrest in Great Britain. [1917.]
- *No. 340. Chinese migrations, with special reference to labor conditions. [1923.]
- No. 349. Industrial relations in the West Coast lumber industry. [1923.]
- *No. 361. Labor relations in the Fairmont (W. Va.) bituminous-coal field. [1924.]
- No. 380. Postwar labor conditions in Germany. [1925.]
- No. 383. Works council movement in Germany. [1925.]
- No. 384. Labor conditions in the shoe industry in Massachusetts, 1920-1924.
- No. 399. Labor relations in the lace and lace-curtain industries in the United States. [1925.]
- No. 534. Labor conditions in the Territory of Hawaii, 1929-1930.
- No. 558. Labor conditions of women and children in Japan. [1931.]

Labor laws of the United States (including decisions of courts relating to labor).

- *No. 211. Labor laws and their administration in the Pacific States. [1917.]
- No. 229. Wage-payment legislation in the United States. [1917.]
- No. 285. Minimum-wage laws of the United States: Construction and operation. [1921.]
- No. 321. Labor laws that have been declared unconstitutional. [1922.]
- No. 322. Kansas Court of Industrial Relations. [1923.]
- No. 343. Laws providing for bureaus of labor statistics, etc. [1923.]
- No. 370. Labor laws of the United States, with decisions of courts relating thereto. [1925.]
- No. 408. Laws relating to payment of wages. [1926.]
- No. 548. Decisions of courts and opinions affecting labor, 1929-1930.
- No. 552. Labor legislation, 1930.

Proceedings of annual conventions of the Association of Governmental Officials in Industry of the United States and Canada. (Name changed in 1928 from Association of Governmental Labor Officials of the United States and Canada.)

- *No. 266. Seventh, Seattle, Wash., July 12-15, 1920.
- No. 307. Eighth, New Orleans, La., May 2-6, 1921.
- *No. 323. Ninth, Harrisburg, Pa., May 22-26, 1922.
- *No. 352. Tenth, Richmond, Va., May 1-4, 1923.
- *No. 389. Eleventh, Chicago, Ill., May 19-23, 1924.
- *No. 411. Twelfth, Salt Lake City, Utah, August 13-15, 1925.
- *No. 429. Thirteenth, Columbus, Ohio, June 7-10, 1926.
- No. 455. Fourteenth, Paterson, N. J., May 31 to June 3, 1927.
- *No. 480. Fifteenth, New Orleans, La., May 21-24, 1928.
- No. 508. Sixteenth, Toronto, Canada, June 4-7, 1929.
- No. 530. Seventeenth, Louisville, Ky., May 20-23, 1930.
- No. 563. Eighteenth, Boston, Mass., May 18-22, 1931.

Proceedings of annual meetings of the International Association of Industrial Accident Boards and Commissions.

- No. 210. Third, Columbus, Ohio, April 25-28, 1916.
- No. 248. Fourth, Boston, Mass., August 21-25, 1917.
- No. 264. Fifth, Madison, Wis., September 24-27, 1918.
- *No. 273. Sixth, Toronto, Canada, September 23-26, 1919.

Proceedings of annual meetings of the International Association of Industrial Accident Boards and Commissions—Continued.

- No. 281. Seventh, San Francisco, Calif., September 20-24, 1920.
- No. 304. Eighth, Chicago, Ill., September 19-23, 1921.
- No. 333. Ninth, Baltimore, Md., October 9-13, 1922.
- *No. 359. Tenth, St. Paul, Minn., September 24-26, 1923.
- No. 385. Eleventh, Halifax, Nova Scotia, August 26-28, 1924.
- No. 395. Index to proceedings, 1914-1924.
- No. 406. Twelfth, Salt Lake City, Utah, August 17-20, 1925.
- No. 432. Thirteenth, Hartford, Conn., September 14-17, 1926.
- *No. 456. Fourteenth, Atlanta, Ga., September 27-29, 1927.
- No. 485. Fifteenth, Paterson, N. J., September 11-14, 1928.
- No. 511. Sixteenth, Buffalo, N. Y., October 8-11, 1929.
- No. 536. Seventeenth, Wilmington, Del., September 22-26, 1930.
- No. 564. Eighteenth, Richmond, Va., October 5-8, 1931.

Proceedings of annual meetings of the International Association of Public Employment Services.

- No. 192. First, Chicago, December 19 and 20, 1913; second, Indianapolis, September 24 and 25, 1914; third, Detroit, July 1 and 2, 1915.
- *No. 220. Fourth, Buffalo, N. Y., July 20 and 21, 1916.
- No. 311. Ninth, Buffalo, N. Y., September 7-9, 1921.
- No. 337. Tenth, Washington, D. C., September 11-13, 1922.
- No. 355. Eleventh, Toronto, Canada, September 4-7, 1923.
- No. 400. Twelfth, Chicago, Ill., May 19-23, 1924.
- No. 414. Thirteenth, Rochester, N. Y., September 15-17, 1925.
- No. 478. Fifteenth, Detroit, Mich., October 25-28, 1927.
- No. 501. Sixteenth, Cleveland, Ohio, September 18-21, 1928.
- No. 538. Seventeenth, Philadelphia, Pa., September 24-27, 1929; eighteenth, Toronto, Canada, September 9-12, 1930.

Productivity of labor.

- No. 356. Productivity costs in the common-brick industry. [1924.]
- No. 360. Time and labor costs in manufacturing 100 pairs of shoes, 1923.
- No. 407. Labor cost of production and wages and hours of labor in the paper box-board industry. [1926.]
- *No. 412. Wages, hours, and productivity in the pottery industry, 1925.
- No. 441. Productivity of labor in the glass industry. [1927.]
- No. 474. Productivity of labor in merchant blast furnaces. [1928.]
- No. 475. Productivity of labor in newspaper printing. [1929.]
- No. 550. Cargo handling and longshore labor conditions. [1932.]
- No. 574. Technological changes and employment in the United States Postal Service. (In press.)

Retail prices and cost of living.

- *No. 121. Sugar prices, from refiner to consumer. [1913.]
- *No. 130. Wheat and flour prices, from farmer to consumer. [1913.]
- *No. 164. Butter prices, from producer to consumer. [1914.]
- *No. 170. Foreign food prices as affected by the war. [1915.]
- No. 357. Cost of living in the United States. [1924.]
- No. 369. The use of cost-of-living figures in wage adjustments. [1925.]
- No. 495. Retail prices, 1890 to 1928.

Safety codes.

- No. 336. Safety code for the protection of industrial workers in foundries.
- No. 350. Rules governing the approval of headlighting devices for motor vehicles.
- *No. 351. Safety code for the construction, care, and use of ladders.
- No. 375. Safety code for laundry machinery and operations.
- *No. 382. Code of lighting school buildings.
- No. 410. Safety code for paper and pulp mills.
- *No. 430. Safety code for power presses and foot and hand presses.
- No. 447. Safety code for rubber mills and calenders.
- No. 451. Safety code for forging and hot-metal stamping.
- No. 463. Safety code for mechanical power-transmission apparatus—first revision.
- No. 509. Textile safety code.
- No. 512. Code for identification of gas-mask canisters.
- No. 519. Safety code for woodworking plants, as revised 1930.
- No. 527. Safety code for use, care, and protection of abrasive wheels, as revised 1930.
- No. 556. Code of lighting: Factories, mills, and other work places. (Revision of 1930.)
- No. 562. Safety codes for the prevention of dust explosions.

Vocational and workers' education.

- *No. 159. Short-unit courses for wage earners, and a factory school experiment. [1915.]
- *No. 162. Vocational education survey of Richmond, Va. [1915.]
- *No. 199. Vocational education survey of Minneapolis, Minn. [1917.]
- No. 271. Adult working-class education in Great Britain and the United States. [1920.]
- No. 459. Apprenticeship in building construction. [1928.]

Wages and hours of labor.

- *No. 146. Wages and regularity of employment and standardization of piece rates in the dress and waist industry of New York City. [1914.]
- *No. 147. Wages and regularity of employment in the cloak, suit, and skirt industry. [1914.]
- No. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
- *No. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
- *No. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
- No. 204. Street-railway employment in the United States. [1917.]
- No. 218. Wages and hours of labor in the iron and steel industry, 1907 to 1915: With a glossary of occupations.
- *No. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
- No. 265. Industrial survey in selected industries in the United States, 1919.
- No. 297. Wages and hours of labor in the petroleum industry, 1920.
- No. 356. Productivity costs in the common-brick industry. [1924.]

Wages and hours of labor—Continued.

- No. 358. Wages and hours of labor in the automobile-tire industry, 1923.
- No. 360. Time and labor costs in manufacturing 100 pairs of shoes, 1923.
- No. 365. Wages and hours of labor in the paper and pulp industry, 1923.
- No. 407. Labor cost of production and wages and hours of labor in the paper box-board industry. [1926.]
- *No. 412. Wages, hours, and productivity in the pottery industry, 1925.
- No. 416. Hours and earnings in anthracite and bituminous coal mining, 1922 and 1924.
- No. 484. Wages and hours of labor of common street laborers, 1928.
- No. 499. History of wages in the United States from colonial times to 1928.
- No. 502. Wages and hours of labor in the motor-vehicle industry, 1928.
- No. 504. Wages and hours of labor in the hosiery and underwear industries, 1907 to 1928.
- No. 514. Pennsylvania Railroad wage data. From Report of Joint Fact Finding Committee in the wage negotiations in 1927.
- No. 516. Hours and earnings in bituminous-coal mining, 1929.
- No. 522. Wages and hours of labor in foundries and machine shops, 1929.
- No. 523. Wages and hours in the manufacture of airplanes and aircraft engines, 1929.
- No. 525. Wages and hours of labor in the Portland cement industry, 1929.
- No. 532. Wages and hours of labor in the cigarette manufacturing industry, 1930.
- No. 533. Wages and hours of labor in woolen and worsted goods manufacturing, 1910 to 1930.
- No. 534. Labor conditions in the Territory of Hawaii, 1929-1930.
- No. 535. Wages and hours of labor in the slaughtering and meat-packing industry, 1929.
- No. 537. Wages and hours of labor in the dyeing and finishing of textiles, 1930.
- No. 539. Wages and hours of labor in cotton-goods manufacturing, 1910 to 1930.
- No. 546. Wages and hours in rayon and other synthetic textile manufacturing, 1930.
- No. 547. Wages and hours of labor in the cane-sugar refining industry, 1930.
- No. 551. Wages and hours of labor in the boot and shoe industry, 1910 to 1930.
- No. 557. Wages and hours of labor in the men's clothing industry, 1911 to 1930.
- No. 560. Wages and hours of labor in the lumber industry in the United States, 1930.
- No. 566. Union scales of wages and hours of labor, May 15, 1931.
- No. 567. Wages and hours of labor in the iron and steel industry, 1931. (In press.)
- No. 568. Wages and hours of labor in the manufacture of silk and rayon goods, 1931.
- No. 570. Wages and hours of labor in foundry and machine shops, 1931. (In press.)
- No. 571. Wages and hours of labor in the furniture industry, 1910 to 1931.
- No. 573. Wages and hours of labor in metalliferous mining, 1924 and 1931. (In press.)
- No. 575. Wages and hours of labor in air transportation. (In press.)

Welfare work.

- *No. 123. Employers' welfare work. [1913.]
- No. 222. Welfare work in British munition factories. [1917.]
- *No. 250. Welfare work for employees in industrial establishments in the United States. [1919.]
- No. 458. Health and recreation activities in industrial establishments, 1926.

Wholesale prices.

- *No. 284. Index numbers of wholesale prices in the United States and foreign countries. [1921.]
- *No. 453. Revised index numbers of wholesale prices, 1923 to July, 1927.
- No. 572. Wholesale prices, 1931. (In press.)

Women and children in industry.

- *No. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. [1913.]
- *No. 117. Prohibition of night work of young persons. [1913.]
- *No. 118. Ten-hour maximum working-day for women and young persons. [1913.]
- No. 119. Working hours of women in the pea canneries of Wisconsin. [1913.]
- *No. 122. Employment of women in power laundries in Milwaukee. [1913.]
- No. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. [1914.]
- *No. 167. Minimum-wage legislation in the United States and foreign countries. [1915.]
- *No. 175. Summary of the report on condition of woman and child wage earners in the United States. [1915.]
- *No. 176. Effect of minimum-wage determinations in Oregon. [1915.]
- *No. 180. The boot and shoe industry in Massachusetts as a vocation for women. [1915.]
- *No. 182. Unemployment among women in department and other retail stores of Boston, Mass. [1916.]
- No. 193. Dressmaking as a trade for women in Massachusetts. [1916.]
- No. 215. Industrial experience of trade-school girls in Massachusetts. [1917.]
- *No. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children. [1917.]
- *No. 223. Employment of women and juveniles in Great Britain during the war. [1917.]
- No. 253. Women in the lead industries. [1919.]
- No. 467. Minimum wage legislation in various countries. [1928.]
- No. 558. Labor conditions of women and children in Japan. [1931.]

Workmen's insurance and compensation (including laws relating thereto).

- *No. 101. Care of tuberculous wage earners in Germany. [1912.]
- *No. 102. British national insurance act, 1911.
- *No. 103. Sickness and accident insurance law in Switzerland. [1912.]
- No. 107. Law relating to insurance of salaried employees in Germany. [1913.]
- *No. 155. Compensation for accidents to employees of the United States. [1914.]
- *No. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions, Washington, D. C., December 5-9, 1916.
- *No. 243. Workmen's compensation legislation in the United States and foreign countries, 1917 and 1918.
- No. 301. Comparison of workmen's compensation insurance and administration. [1922.]
- No. 312. National health insurance in Great Britain, 1911 to 1921.
- *No. 379. Comparison of workmen's compensation laws of the United States as of January 1, 1925.
- No. 477. Public-service retirement systems, United States and Europe. [1929.]
- No. 496. Workmen's compensation legislation of the United States and Canada as of January 1, 1929. (With text of legislation enacted in 1927 and 1928.)
- No. 529. Workmen's compensation legislation of the Latin American countries. [1930.]

Miscellaneous series.

- *No. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- No. 208. Profit sharing in the United States. [1916.]
- No. 242. Food situation in central Europe, 1917.
- No. 254. International labor legislation and the society of nations. [1919.]
- No. 268. Historical survey of international action affecting labor. [1920.]
- No. 282. Mutual relief associations among Government employees in Washington, D. C. [1921.]
- No. 319. The Bureau of Labor Statistics: Its history, activities, and organization. [1922.]
- No. 326. Methods of procuring and computing statistical information of the Bureau of Labor Statistics. [1923.]
- No. 342. International Seamen's Union of America: A study of its history and problems. [1923.]
- No. 346. Humanity in government. [1923.]
- No. 372. Convict labor in 1923.
- No. 386. Cost of American almshouses. [1925.]
- No. 398. Growth of legal-aid work in the United States. [1926.]
- No. 401. Family allowances in foreign countries. [1926.]
- No. 461. Labor organizations in Chile. [1928.]
- *No. 465. Beneficial activities of American trade-unions. [1928.]
- No. 479. Activities and functions of a State department of labor. [1928.]
- No. 483. Conditions in the shoe industry in Haverhill, Mass., 1928.
- *No. 489. Care of aged persons in United States. [1929.]
- No. 505. Directory of homes for the aged in the United States. [1929.]
- No. 506. Handbook of American trade-unions. 1929 edition.
- No. 518. Personnel research agencies. 1930 edition.
- No. 541. Handbook of labor statistics. 1931 edition.
- No. 561. Public old-age pensions and insurance in the United States and in foreign countries. [1932.]
- No. 565. Park recreation areas in the United States, 1930.